

California High-Speed Rail Authority



RFP No.: HSR13-57

**Request for Proposals for Design-Build
Services for Construction Packages 2 - 3**

**Reference Material, Part E.3 –
Merced – Fresno Section 401 Water Quality
Certification**



State Water Resources Control Board

AMENDED CLEAN WATER ACT SECTION 401
WATER QUALITY CERTIFICATION FOR
CALIFORNIA HIGH SPEED RAIL AUTHORITY
CALIFORNIA HIGH SPEED TRAIN – MERCED TO FRESNO PERMITTING PHASE 1
FILE NO. SB13001IN, REGULATORY MEASURE (RM) # 391375
U.S. ARMY CORPS OF ENGINEERS FILE NUMBER SPK-2009-01483

AMENDMENT: On April 7, 2014, the High Speed Rail Authority requested a time extension for providing a financial assurances instrument for compensatory mitigation to the State Water Resources Control Board as required in Additional Condition Number 50 and Attachment F of this Clean Water Act Section 401 Water Quality Certification issued on March 12, 2014. This amendment provides a twelve (12) month extension to the due date of the financial assurances instrument.

All changes due to this amendment to the Clean Water Act Section 401 Water Quality Certification issued on March 12, 2014, are shown below as additions in **bold underline**, and deletions in **bold strikethrough**. Changes are limited to Additional Condition Number 50 and Attachment F. No other changes are authorized or intended by this amendment.

PROJECT: California High Speed Rail Authority – California High Speed Train System – Merced to Fresno Permitting Phase 1.

APPLICANT:

Mr. Mark McLoughlin, Deputy Director
California High Speed Rail
Authority
770 L Street, Suite 880
Sacramento, CA 95814

APPLICANT'S AGENT:

Mr. Mark Oliver, Program Manager
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2525 Airpark Drive
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This Clean Water Act Section 401 Water Quality Certification (Certification) responds to your request on behalf of the California High Speed Rail Authority (HSRA or Applicant) for certification of the California High Speed Train (HST) System – Merced to Fresno Permitting Phase 1 (Project). Your application was received on May 17, 2013, and deemed complete on June 17, 2013.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, Ca 95812-0100 | www.waterboards.ca.gov

ACTION:

- Order for Standard Certification
- Order for Technically Conditioned Certification
- Order for Denial of Certification
- Order for Waiver of Waste Discharge Requirements

AUTHORIZATION:

This Order conditionally certifies the Project as described in Attachment B, Project Information, of this Order. The Project is the first of nine sections for the complete HST system. The HST system will ultimately connect San Francisco and Los Angeles and encompasses 800 miles, including extensions to Sacramento and San Diego. The system is proposed to be an electrically powered, high-speed, steel-wheel-on-steel-rail technology with safety, signaling, and automated train-control systems. The trains are proposed to operate at speeds of up to 220 miles per hour over a fully grade-separated, dedicated track alignment.

The purpose of this Project is to construct the initial Merced to Fresno section of the HST system. This Project includes an additional construction phase yet to be scheduled that is not covered under this Certification (See Attachment C, Project Area Maps). The Project footprint includes the HST track alignment, the track right-of-way and Project facilities. These facilities include a downtown Fresno station, electrical traction power substations, and switching and paralleling stations (collectively, Non-Rail Facilities). Additionally, proposed shifts in the existing roadway rights-of-way associated with the Project, including overcrossings and interchanges, are included to accommodate the HST system. The north end of the alignment for the Project starts at Avenue 17 (Madera County) and ends south of State Route (SR) 41 adjacent to Los Angeles Street (city of Fresno) in the south.

Currently Project pre-construction activities are underway (finalizing design, relocating utilities, acquiring properties, etc.) with significant construction planned in the next six months. Construction work will start at Avenue 17 in Madera County to just south of the downtown Fresno station (See Attachment C, Project Area Maps). Primary construction elements of the project are proposed to be complete by the end of 2017. Some project elements, such as the installation of track and electrical facilities, and the construction of the Fresno station may extend beyond 2017.

The HSRA is the Project's lead agency under California Environmental Quality Act (CEQA). The HSRA Board of Directors, as the lead agency, certified the Final Environmental Impact Report/Environmental Impact Statement (FEIR/FEIS) and issued a Notice of Determination in accordance with CEQA on May 3, 2012. The Board also approved the Hybrid Alternative Project for the north/south system alignment and the Downtown Merced and Downtown Fresno Mariposa Street station locations. In doing so, the HSRA Board adopted CEQA findings of fact, a corresponding statement of overriding considerations, and a Mitigation Monitoring and Reporting Program (MMRP). Public Resources Code section 21081.6(a)(1) requires that the Lead Agency adopt a MMRP, at the time the Lead Agency determines to carry out a project, to monitor and/or report on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.

The Federal Railroad Administration (FRA) is the Project's lead agency under the National Environmental Policy Act (NEPA). The FRA issued a Record of Decision (ROD) under NEPA on September 18, 2012. Through the ROD, the FRA approved the Hybrid Alternative and Downtown Merced and Downtown Fresno Mariposa Street station locations, consistent with the

HSRA decision in May 2012. The Final EIR/EIS has been made available to the public and public agencies pursuant to CEQA and the NEPA.

STANDARD CONDITIONS:

1. This Certification action and Order are subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to the Water Code, section 13330, and the California Code of Regulations, title 23, section 3867 and following.
2. This Certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent Certification application was filed pursuant to California Code of Regulations, title 23, section 3855, subdivision (b), and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. This Certification is conditioned upon total payment of any fee required under California Code Regulations, title 23, and owed by the Applicant.
4. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties, processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification Order.

ADMINISTRATIVE CONDITIONS:

5. Minor modifications of Project locations or predicted impacts may be necessary as a result of unforeseen field conditions, necessary engineering re-design, construction concerns, or similar reasons. Some of these prospective Project modifications may have impacts on waters resources.

Some modifications of Project locations or predicted impacts may qualify as Certification Deviations. For purposes of this Certification, a "Certification Deviation" is a Project locational or impact modification that does not require an immediate amendment of the Certification, because the State Water Resources Control Board (State Water Board) has determined that any potential water resource impacts that may result from the change are sufficiently addressed by the Certification conditions and the FEIR/FEIS. Project modifications that warrant or necessitate changes to Certification conditions that are not addressed by existing environmental documents will require an amendment to this Certification and do not qualify for the Certification Deviation procedures set forth in Attachment D. After the termination of construction, this Certification will be amended to reflect all authorized Certification Deviations and any resulting adjustments to the amount of water resource impacts and required compensatory mitigation amounts.

6. As appropriate to ensure compliance with applicable water quality standards, the State Water Board reserves the right to suspend, cancel, or modify and reissue this Certification, after providing notice to the Applicant and/or its contractor/sub-contractor, if the State Water Board determines that the Applicant or any of its agents fail to comply with any of the terms or conditions of this Certification.
7. A copy of this Certification must be available at the Project site(s) during construction for review by site personnel and agencies. All personnel performing work on the proposed Project shall be familiar with the content of this Certification and its location on the Project site(s).
8. The Applicant shall grant the State Water Board and the Central Valley Regional Water Quality Control Board (Regional Water Board) staff, or an authorized representative, upon presentation of credentials and other documents as may be required by law, permission to enter the Project site(s) to ensure compliance with the terms and conditions of this Certification and/or to determine the impacts the Project may have on waters of the state, as defined in Water Code section 13050, subdivision (e).
9. For the purpose of this Certification, "start of construction" means commencement of any on-site construction activities within 100 feet of waters of the state, or that have the potential to affect waters of the state. Such activities include, but are not limited to:
 - establishment of off-site work areas,
 - move-in of materials,
 - site clearing,
 - grading,
 - dredging,
 - landfilling,
 - changing equipment,
 - substituting equipment, or
 - moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source.
10. Prior to the start of construction, the Applicant shall submit to the State Water Board, Project area maps that clearly identify all major Project features, mileposts, or other location descriptors with the location identification system used by HSRA and its contractors. This location identification system must be used for all Project environmental reporting and documentation. The Applicant shall instruct all contractors to use this location identification system in all environmental compliance documentation and reporting.
11. Prior to start of construction, the Applicant shall submit to the State Water Board a current list of key personnel who are responsible for compliance with this Certification and the MMRP adopted by HSRA. This list must be maintained and updated as needed. State Water Board staff must be notified within 3 days of all updates to the list.

ADDITIONAL CONDITIONS – MITIGATION MONITORING AND REPORTING PROGRAM:

12. The Applicant and its contractors shall abide by all mitigation measures as described in the MMRP, as adopted by HSRA in May 2012 and subsequently revised on August 30, 2013 (i.e., Revision 2). Any subsequent revision of the MMRP that may affect waters of the state must be approved by State Water Board staff prior to adoption and implementation.
13. The Biological Resources Management Plan (BRMP), as required Mitigation Measure (MM) Bio-MM#5 and the MMRP, must include all biological resources mitigation measures that are described in the FEIR/FEIS. The BRMP includes measures to protect water quality and beneficial uses of waters of the state; therefore, the conditions of the BRMP that address water quality and beneficial uses must be approved by State Water Board staff prior to adoption by HSRA, and prior to the start of construction.
14. The Applicant is responsible for ensuring that all Project personnel follow proper weed control practices. As specified in Bio-MM#4, a Weed Control Plan(s) must be prepared and implemented for the entire Project, including the off-site compensatory mitigation sites. In addition to the plan elements specified in the MMs and the MMRP, the Weed Control Plan(s) must include measures to: (1) limit movement of weed propagules by vehicular traffic through route restrictions; (2) use cleaning stations; and, (3) provide training of Project personnel in prevention of weed dispersal. The Weed Control Plan(s), and any subsequent revisions, must be approved by State Water Board staff prior to implementation and prior to the start of construction.
15. A Water Quality Monitor shall be employed during construction and shall report to the Contactor's Mitigation Manager as designated in the MMRP. The Water Quality Monitor shall be onsite during all ground-disturbing activities that have the potential to affect water quality. The Water Quality Monitor must be notified by the contractor 24 hours prior to the implementation of all MM's pertaining to hydrology, water quality, erosion control, and storm water management. The Water Quality Monitor shall report on compliance of these Project MMs and related conditions of this Certification. The designated Water Quality Monitor shall be qualified and knowledgeable in water quality, erosion and sediment control regulations, practices and principles. The Water Quality Monitor must, at minimum, be a Qualified Storm Water Pollution Prevention Plan (SWPPP) Practitioner (QSP) or a Qualified SWPPP Developer (QSD) as defined in the State Water Board Order 2009-0009-DWQ, effective July 1, 2010, as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ [NPDES No. CAS000002] (collectively, Construction General Permit).
16. Project MMs pertaining to biological resources shall be monitored by a Project Biological Monitor. The Project Biological Monitor must be notified 24 hours prior to the implementation of a biological MM by the contractor. The reports of the status of biological MM must be reported directly to the Project Biological Monitor by the contractor.

ADDITIONAL CONDITIONS – BEST MANAGEMENT PRACTICES (BMPs):

17. BMPs set forth in this Order may be modified to account for site-specific conditions; or if after construction, a BMP fails to result in compliance with water quality standards or other conditions in this Certification. Any such modifications may be approved by the State Water Board 401 Program Manager if such modifications provide equal or greater water quality protection and comply with water quality standards.

Project Site BMPs

18. All BMP materials and supplies must be on-site and ready for use at the start of construction activity, and must remain in supply and ready for implementation throughout the construction process. All non-structural BMP materials (e.g., training documents, compliance tracking procedures) must be ready for use at the start of construction.
19. Any straw or hay used for any Project purpose must be certified as weed free.
20. All Project personnel must receive Worker Environmental Awareness Program (WEAP) training before starting work in the Project area, as described in mitigation measure Bio-MM#3 in the MMRP. The WEAP shall include training in appropriate water quality protection measures, including compliance with pertinent conditions of this Certification.
21. The limits of Project disturbance identified in the Project construction plans must be clearly identified in the field with highly visible markers such as construction fencing or silt barriers prior to start of construction activities within waters of the state. Such identification must be properly maintained until construction is completed and the soils have been stabilized. Equipment, materials, or any other substances or activities that may impact waters of the state outside of the limits of Project disturbance are prohibited.
22. Environmentally sensitive areas and environmentally restricted areas must be delineated for exclusion prior to start of construction, as required by mitigation measure Bio-MM#7.
23. Installation and operation of any underground storage tanks must be conducted in compliance with Health and Safety Code, division 20, chapter 6.7 (commencing with section 25280) and California Code of Regulations, title 23, division 3, chapter 16 (commencing with section 2610).

Construction Water Quality BMPs

24. BMPs must be used in areas where access roads intersect waters of the state. Temporary materials placed in any water of the state must be removed as soon as construction is completed at that location, and all temporary roads must be removed or re-contoured and restored according to approved re-vegetation and restoration plans.
25. All stormwater discharged from the Project site must comply with the Construction General Permit and all other applicable storm water discharge permits.
26. Appropriate BMPs must be implemented throughout Project activities to prevent and control potential leaks/spills/drainage of potentially hazardous materials such as: petroleum lubricants, fluids and fuels; non-petroleum lubricants, fluids and fuels such as non-petroleum hydraulic fluid; cured and uncured cements; epoxies, paints and other protective coating materials; cement concrete or asphalt concrete, and washings and cuttings thereof.
27. Fueling, lubrication, maintenance, storage, and staging of vehicles and equipment must not result in a discharge to any waters of the state, and must be located outside of waters of the state in areas where accidental spills will not enter or affect such waters.

28. A daily log must be maintained during construction to note the presence and absence of waste releases from vehicles and equipment parked or operated within 100 feet of waters of the state. Copies of the daily log must be maintained on-site. Daily visual inspections for waste releases of all vehicles and equipment parked or operating within or within 100 feet of waters of the state must be conducted before the vehicles or equipment are used for conducting work for the day. Any spillage from leaks must be reported in the daily log and contaminated soils must be immediately removed from the Project site and disposed of at an approved area or facility. State Water Board staff may request this information at any time. Any waste releases (i.e., spills, leaks, etc.) of five gallons or greater must be reported to State Water Board staff within 24 hours with an explanation of how the problem was resolved.
29. No rubbish, waste material or waste containers, except on-board litter bags in vehicles or equipment, shall be deposited within 100 feet of waters of the state.
30. If construction-related materials reach surface waters, appropriate spill response procedures must be initiated as soon as the incident is discovered. In addition, the State Water Board staff contact identified in this Certification must be notified via email and telephone within twenty-four (24) hours of the occurrence.

In-Water Work BMPs

31. In-water work activities must not cause water quality objectives of the receiving waters to be exceeded.
32. Disturbed in-water work areas must be temporarily stabilized to prevent erosion at least 48 hours prior to the predicted commencement of a rainfall event with greater than a 50 percent probability of occurrence, as predicted by the National Oceanic and Atmospheric Administration (NOAA) - National Weather Service. If the predicted commencement of such a rainfall event is less than 48 hours after the prediction, temporary stabilization of the disturbed in-water work areas must begin immediately.
33. Bridges, culverts, dip crossings, or other structures must be installed so that water and sediment flow is not impeded.
34. Any structure, including but not limited to, culverts, pipes, piers, and coffer dams, placed within a stream where fish (as defined in Fish and Game Code section 45) exist or may exist, must be designed, constructed, and maintained such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish due to impedance of their upstream or downstream movement. This includes, but is not limited to, maintaining the supply of water and maintaining flows at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. If any structure results in a long-term reduction in fish movement, the Applicant shall be responsible for restoration of conditions as necessary (as determined by the State Water Board and Regional Water Board) to secure passage of fish across the structure.
35. Stream-crossing structures must be designed and constructed to safely convey the flow from the 100-year, 24-hour storm event (including associated bed load and debris movement) and must not result in a change in floodway elevations of more than 12 inches. Stream-crossing structures must be properly aligned within the stream and otherwise

engineered, installed, and maintained, to assure resistance to washout, and to prevent erosion and/or aggradation of the stream.

36. Except for the following conditions, equipment must not be operated in standing or flowing waters without site-specific approval from State Water Board staff:

- a. All construction activities must be effectively isolated from water flows to the greatest extent possible. This may be accomplished by working in the dry season or dewatering the work area in the wet season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. All open flow temporary diversion channels must be lined with filter fabric or other appropriate liner material to prevent erosion. Structures used to isolate the in-water work area and/or diverting the water flow (e.g., coffer dam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized.
- b. Coffer dams and water barrier construction must be adequate to prevent seepage into or from the work area to the greatest extent feasible.
- c. Flow diversions must be conducted in a manner that prevents pollution and/or siltation and in a manner that restores pre-Project flows (except for variation in flows due to seasonality, upstream diversions, etc.) upon completion of the activity. Diverted flows must be of sufficient quality and quantity, and of appropriate temperature, to support existing fish and other aquatic life both above and below the diversion. Diversions must be designed, installed, and maintained to reduce erosion. Pre-Project flows must be restored to the affected surface water body upon completion of work at that location.

37. If groundwater dewatering is required for the Project, the Applicant shall consult with the Regional Water Board to determine if additional permits are required. If additional Regional Water Board permits relating to dewatering are required, the designated State Water Board staff contact identified in this Certification must be notified and copied on pertinent correspondence pertaining to those other required permits.

38. When dewatering is necessary, the water must be pumped or channeled through a sediment settling or filtration device prior to return discharge to the water body. The enclosure and the supporting material for settling or filtration devices must be removed when the dewatering activity is completed. Removal must proceed from upstream to downstream when multiple devices are deployed.

ADDITIONAL CONDITIONS – SURFACE WATER MONITORING:

39. Surface water monitoring shall be implemented when: (1) in-water work is performed; (2) Project activities result in any materials reaching surface waters; or (3) Project activities result in the creation of a visible plume in surface waters. Monitoring of the water quality objectives listed below in subsections (a) through (e) shall be conducted immediately upstream out of the influence of the Project and within 300 feet downstream of the active work area.

Sampling frequency shall be at least once prior to scheduled activities and then every four hours during the activity (or after the discharge is discovered in the case of (2) and (3) described in the above paragraph), and at least one hour after the end of each day's work until the water quality objectives listed below in subsections (a) through (e) below are met. Overnight monitoring of affected stream reaches after each day's work is not required. Turbidity measurements must be collected within one hour after barrier installation and within one hour after barrier removal.

Results of the analysis shall be submitted to the State Water Board within two weeks of initiation of sampling and every two weeks thereafter. A map or drawing indicating the locations of the sampling points must be included with each submittal. If monitoring samples collected exceed the limits described below, then this must be reported to State Water Board staff within 24 hours of occurrence or discovery. Constituent measurements must comply with the following limits:

- a. pH: The Project activities must not depress pH in receiving waters below 6.5 or raise pH above 8.5 as a result of waste discharges.
- b. Temperature: For waters designated COLD or WARM, the Project activities must not alter the receiving water temperature by more than 5°F above the natural temperature.
- c. Dissolved Oxygen:
 - i. The dissolved oxygen concentration of all surface waters designated as WARM must not be depressed below 5.0 mg/l as a result of waste discharges due to Project activities.
 - ii. The dissolved oxygen concentration of all surface waters designated as COLD or SPWN must not be depressed below 7.0 mg/l as a result of waste discharges due to Project activities.
- d. Turbidity:

Turbidity limits are listed below separately for discharges in areas subject to the Water Quality Control Plan for (1) the Sacramento and San Joaquin River Basins and (2) the Tulare Lake Basin. Project activities in these areas must not cause turbidity to exceed the applicable limits listed below.

Except during in-water working periods, these limits will be eased to allow a turbidity increase of 15 Nephelometric Turbidity Units (NTUs) over background turbidity within 300 feet downstream from the working area, and the limits below shall only apply outside of the 300 foot area during this period. In determining compliance with the limits listed below, appropriate averaging periods may be applied provided that beneficial uses will be fully protected and Regional Water Board approval is obtained. Prior approval must be obtained in advance of in-water work.

For discharges to areas subject to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Project activities must not cause turbidity in surface waters to exceed the following limits:

- i. where natural turbidity is less than 1 NTU, increases shall not exceed 2 NTUs;

- ii. where natural turbidity is between 1 and 5 NTUs, increases above natural shall not exceed 1 NTU;
- iii. where natural turbidity is between 5 and 50 NTUs, increases above natural shall not exceed 20 percent of turbidity;
- iv. where natural turbidity is between 50 and 100 NTUs, increases above natural shall not exceed 10 NTUs of turbidity; and
- v. where natural turbidity is greater than 100 NTUs, increases above natural shall not exceed 10 percent of turbidity.

For discharges to areas subject to the Water Quality Control Plan for the Tulare Lake Basin, Project activities must not cause turbidity in surface waters to exceed the following limits:

- i. where natural turbidity is between 0 and 5 NTUs, increases above natural shall not exceed 1 NTU;
 - ii. where natural turbidity is between 5 and 50 NTUs, increases above natural shall not exceed 20 percent of turbidity;
 - iii. where natural turbidity is between 50 and 100 NTUs, increases above natural shall not exceed 10 NTUs of turbidity; and
 - iv. where natural turbidity is greater than 100 NTUs, increases above natural shall not exceed 10 percent of turbidity.
- e. Settleable Matter: Project activities shall not cause settleable matter to exceed 0.1 ml/l in surface waters as measured in surface waters 300 feet downstream from the Project in-water work site.

ADDITIONAL CONDITIONS – IMPACTS AND COMPENSATORY MITIGATION:

Project Impacts

40. At the request of HSRA, the U.S. Army Corps of Engineers (Corps) issued a Preliminary Jurisdictional Determination (PJD) for all waters delineated by HSRA on the Project site. A PJD is a non-binding opinion by the Corps that there may be jurisdictional waters of the United States on a particular site. The PJD process has been developed by the Corps to expedite the required Clean Water Act section 404 permitting. The PJD process allows the permit applicant to voluntarily waive or set aside questions regarding Clean Water Act or Rivers and Harbors Act jurisdiction over a particular site so that the Corps is not obligated to perform a formal delineation of federal waters. HSRA delineated approximately 121.87 acres of wetlands and 321.35 acres of other water bodies on the Project site for the PJD. The impacts shown in Table 1 are based on the PJD.

Table 1: Permanent and Temporary Impacts

HIGH SPEED TRAIN - MERCED TO FRESNO PERMITTING PHASE 1 IDENTIFIED IMPACTS				
Aquatic Resource Type	Impact Amount			
	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (linear feet)	Temporary Impacts (linear. feet)
Streams				
Natural Watercourse (includes San Joaquin River, Cottonwood Creek, and Fresno River)	0.032	1.810	130	170
Constructed Watercourses	1.761	0.100	765	735
Riparian Impacts	1.330	0.600	875	620
Wetlands				
Vernal Pools	1.282	0.000	Not Applicable --- None Reported	Not Applicable --- None Reported
Seasonal Wetlands	0.351	0.000		
Constructed Basins	2.751	2.590		
Open Water	0.831	0.000		
Total Reported Impacts	7.008	4.500	895	905

41. The Applicant shall conduct and submit a full "as-built" assessment of Project impacts to waters of the state within 90 days of the end of Project construction, to verify the amount of impacts that actually occurred. Any changes to the values shown in Table 1 must require appropriate adjustments to compensatory mitigation and fees.

Project Compensatory Mitigation for Unavoidable Impacts to Aquatic Resources

42. Compensatory mitigation shall be required to replace the temporary and permanent loss of wetland and aquatic resource functions in the watershed. Compensatory mitigation refers to the restoration, establishment, enhancement, or in certain circumstances preservation of wetlands, streams or other aquatic resources for the purpose of offsetting unavoidable adverse impacts. The area required for compensatory mitigation must be greater than the area impacted, unless approved by the State Water Board. Thus compensatory mitigation is expressed as a ratio of area required for mitigation to the area impacted, such as, for example, a ratio of 2:1 (two acres of mitigation for one acre of impacted waters).

43. Any portion of a vernal pool that is filled as part of the Project must be replaced by providing compensatory mitigation for the entire area of the vernal pool impacted.

44. The compensatory mitigation ratios for permanent and temporary impacts to waters of the state are presented in Attachment E, Mitigation Ratios.

Permittee-Responsible Mitigation Plan

45. According to the MMRP's Bio-MM#58, the Applicant is to prepare and implement a Habitat Mitigation and Monitoring Plan (H MMP) that will describe applicant mitigation measures for temporary and permanent impacts to "jurisdictional waters and state streambeds." In compliance with this requirement, the Applicant has submitted the March 2014 Permittee

Responsible Mitigation Plan (PRMP) which is incorporated herein by reference and made a part of this Certification.

46. If mitigation goals are not achieved within time frames set in the PRMP, an increase in compensatory mitigation requirements sufficient to account for any additional temporal impacts incurred due to any delay, including construction delays of the mitigation projects and finalization of implementation of the PRMP, may be assessed.

Additional Compensatory Mitigation Requirements

The following additional requirements shall be implemented by HSRA for compensatory mitigation projects. These requirements shall supersede any conflicting requirements or procedures described in the PRMP.

- a. Temporary Project impacts to water body bed, bank and adjacent riparian areas.
 - i. HSRA shall stabilize and restore all temporarily disturbed areas that may impact aquatic resources at a minimum of a 1:1 ratio and according to the requirements of the Construction General Permit and post-construction storm water conditions of this Certification.
 - ii. Site Plan Review. Irrigation plans and related restoration construction documents for temporarily disturbed areas, including seeding mixes, must be submitted to the State Water Board for approval four months prior to restoration implementation at a specific site. HSRA shall restore all temporarily disturbed areas that may impact aquatic resources within 12 months following completion of Project activity at individual restoration locations. This period may be extended to accommodate proper planting times. If restoration is not completed within two years of the impacts, additional mitigation will be required to offset temporal losses of waters of the state.
- b. Permanent Project Impacts.
 - i. Compensatory mitigation plans for permanent impacts shall provide for access to the mitigation sites for all purposes, including vector control activities by vector control agencies and staff, on-going maintenance, and mitigation compliance review by State Water Board staff.
 - ii. Compensatory mitigation plans for permanent impacts shall include any additional information as deemed necessary by the State Water Board or other responsible State or federal agencies
- c. Monitoring and Reporting
 - i. Monitoring and reporting shall be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (e.g., additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be implemented by qualified practitioners during the maintenance and monitoring period if necessary to ensure the success of the restoration. If the restoration fails to meet the success criteria listed in the PRMP

after the maintenance and monitoring period, maintenance and monitoring will be extended until the criteria are met or unless otherwise approved by State Water Board staff.

Monitoring will include periodic condition assessment of wetland compensatory mitigation sites using the California Rapid Assessment Method (CRAM). At the conclusion of the monitoring period, a final CRAM report shall be provided that describes the progression from baseline to the final assessment.

All reports must include the file number of this Certification, SB13001IN, and the Regulatory Measure Number (RM#) 391375. All reports and replacement/restoration site maps shall be uploaded to EcoAtlas.

d. Long Term Management Plan

- i. In accordance with the PRMP, HSRA shall prepare a Long-Term Management Plan (LTMP) for the off-site compensatory mitigation sites. The LTMP must be submitted to the State Water Board for approval within four months of the issuance of this Certification and prior to the start of construction (as defined in Condition 8 above). Substantial changes to the LTMP may result in additional review period(s). Any change in the LTMP, including designation of land manager(s) for the compensatory mitigation sites, must be approved by the State Water Board staff.
- ii. Unless an extension is requested by the Applicant and granted by the State Water Board 401 Program Manager before the four months have expired, failure to meet this deadline may result in a revocation action pursuant to Standard Condition 1 of this Certification. Any such request shall include: a full explanation of the reason and need for an extension; a full explanation of steps the Applicant is taking to address the reasons for the delay; and a detailed schedule for completion.

Compensatory Mitigation Site Acquisition

47. Compensatory Mitigation Site Acquisition Timing.

- a. All compensatory mitigation sites must be acquired or secured (i.e., in escrow or other legally documented purchase process) by the Applicant within 12 months of issuance of this Certification. Any delay in acquiring or securing approved compensatory mitigation sites by the Applicant may result in higher compensatory mitigation ratio requirements to offset the additional temporal losses of waters of the state.
- b. Full title and ownership or land transfer agreements for all compensatory mitigation properties must be finalized by the end of construction of the Project, unless an extension is requested by the Applicant and granted by the State Water Board staff. Completion of construction shall be as defined under the Construction General Permit. Requests for extensions must clearly describe the status of the transactions, the reason(s) for the delay, and the steps to be taken to complete the transactions.

48. Property, conservation easements, and or any other interests in real property obtained for compensatory mitigation must be subject to approval by State Water Board staff.

49. Conservation Easement Deed.

A copy of the conservation easement deed (or other approved instrument) for the approved compensatory mitigation site(s) must be submitted to State Water Board staff within 18 months of issuance of this Certification. The conservation easement(s) will indicate the "Grantor" (original property owner) and "Grantee" (conservation easement holder).

- a. For the purposes of independent review, the Grantee shall not be the HSRA. HSRA shall provide sufficient funds to the Grantee to allow monitoring the preserve in perpetuity; to administer and ensure compliance with the conservation easement terms; and, to report to the State Water Board and other entities with an interest in the conservation easement(s). Funds shall be provided by HSRA to the Grantee within 18 months of issuance of this Certification.
- b. The conservation easement(s) must ensure that the property for compensatory mitigation will be retained in perpetuity in compliance with Civil Code, section 815 et seq. and maintained as described in the Final HMMP.
- c. The conservation easement(s) must provide the Assessor's Parcel Numbers (APNs) for all the properties in the mitigation site. The conservation easement deed must require the holder to report any changes in APNs to the State Water Board 401 Program Manager within 3 days of the change.

Financial Assurances

50. The State Water Board requires that sufficient financial assurances for mitigation be in place prior to the issuance of a water quality certification to ensure that water quality standards are met (40 C.F.R. § 121.2; Cal. Code Regs., tit. 23, § 3831, subd. (u)). However, in cases where an alternative mechanism is available to ensure a high level of confidence that compensatory mitigation will be provided and maintained, the State Water Board may determine that financial assurances are redundant and therefore not necessary.

The HSRA is funded, in part, through general obligation bonds authorized by California voters on November 11, 2008. The Legislature adopted a business plan that set aside up to 7.5 percent of these general obligation bond proceeds for, among other things, mitigation of any direct or indirect environmental impacts (Sts. & Hy. Code, § 2704.08, subd. (g)). The HSRA states that its public agency status and the Legislature's intent to expedite funding for the High Speed Rail Project's environmental mitigation serve as a sufficient guarantee on HSRA's performance of compensatory mitigation requirements. However, HRSA has agreed to provide financial assurances according to the terms in Attachment F ~~no later than the earlier to occur of: (a) impacts to jurisdictional resources; or (b) six months after the issuance of this Certification~~. Pursuant to these terms in Attachment F, HSRA shall enter into a covenant or obligation to spend the amount of mitigation funding necessary to implement and maintain the mitigation required by the PRMP and this Certification. HRSA shall include a provision that names the State Water Board as a third party beneficiary entitled to act, in its sole discretion, to enforce HSRA's obligations to implement and maintain the required mitigation.

The State Water Board acknowledges that the terms set forth in Attachment F, along with any other financial assurances required by the U.S. Army Corps of Engineers in connection with the HSRA application for a permit, should be sufficient. However, the State Water

Board reserves the right to reopen this Certification and require additional financial assurances as deemed necessary by the State Water Board (33 U.S.C. 1341(a)(3); Cal. Code Regs., tit. 23, § 3860, subd. (a)).

Circumstances that may trigger the imposition of additional financial assurances include, but are not limited to: any court order that overturns or invalidates the voter authorization of the general obligation bonds; a proposed legislative amendment or executive order diminishing or striking the set aside for mitigation of environmental impacts; unreasonable delay in meeting compensatory mitigation obligations; or, any other circumstance which results in a reasonable threat that water quality standards will not be met. Any judgment as to whether circumstances warrant the imposition of additional financial assurances shall be in the sole discretion of the State Water Board.

ADDITIONAL CONDITIONS – CONSTRUCTION AND POST-CONSTRUCTION STORM WATER REQUIREMENTS:

51. The Applicant shall obtain coverage under the State Water Board's Construction General Permit for all Project areas that disturb one acre or more of land.
52. The post-construction storm water requirements below meet or exceed the post-construction requirements in Section XIII of the Construction General Permit. As a result, Applicant's compliance with the post-construction storm water requirements in this Certification will also result in compliance with the post-construction requirements in the Construction General Permit.
53. Post-construction requirements in any future individual Municipal Separate Storm Sewer System (MS4) Permit issued by the State Water Board for the HST System will supersede the post-construction requirements in this Certification.
54. Post-Construction Measures: The Applicant shall prepare and submit to the State Water Board, for review and approval, a Water Quality Management Plan (WQMP) and Drainage Concept Report for each new development and re-development site (development site).¹ The Drainage Concept Report must provide detailed, site-specific information about the water quality measures to be implemented in that development area, including site design, source control, low impact development (LID), post-construction treatment control and hydromodification control BMPs to effectively manage wet-weather and dry-weather water quality and quantity by limiting or managing pollutant sources and changes in flow rates and velocities.
55. Landscaping and plant selection: After construction, the Applicant shall re-vegetate areas disturbed by construction using viable seed of California native species. Where feasible, native seed must be collected within and adjacent to the Project area prior to or during construction or obtained from a native plant nursery or native seed supplier. Where feasible, native seed must be collected from local genetic sources in the same or adjacent watershed, collected and planted within the same zone, and within approximately 500 feet of its original elevation. For widespread herbaceous species that are more likely to be

¹ A development site is defined as an area of development within the Project that is contiguous and represents one facility, including ancillary impervious surfaces.

genetically homogenous, seed collection areas may include a broader geographic range. Seed must be free of noxious weeds.

The Applicant must submit a list of commercial seed vendors that collect and sell seeds that are appropriate to the Project area, and recommended seed mixes to State Water Board staff prior to purchase of the seed. Selected seed vendor(s) and seed mix(es), including the origin of the seed and seed ratios within the seed mixes, are subject to State Water Board staff approval.

Post-Construction Treatment Control

56. The Applicant shall implement the post-construction treatment control BMPs as specified in Provision 56 for the development sites that are (a) rail projects that create 1 acre or more of disturbed soil area, (b) Non-Rail Facilities that disturb more than 5,000 square feet or more of land.
57. The Applicant shall apply numeric sizing criteria for post-construction treatment control BMPs. Post-construction treatment control BMPs shall be designed according to the following priorities (in order of preference). At a minimum, the LID-based BMPs must be designed to ensure that post-development site runoff volume from the 85th percentile, 24-hour storm event does not exceed pre-development site runoff volume from the 85th percentile, 24-hour storm event.
 - a. First Preference: Low Impact Development (LID) –based BMPs must be designed so that post-development site runoff volume from the 85th percentile, 24-hour storm event is infiltrated, harvested and re-used, and/or evapotranspired of the Project area.
 - b. Second Preference: In the event the entire runoff volume or flow from an 85th percentile 24-hour storm event cannot be infiltrated, harvested and re-used, or evapotranspired for the Project area, the excess volume may be treated by LID-based flow-through treatment devices.
 - c. Third Preference: Where LID-based flow-through treatment devices are not feasible, the excess volume may be treated through conventional volume-based or flow-based storm water treatment devices.
 - d. Volume-based BMPs: The Applicant, at a minimum, shall calculate² the volume to be treated using one of the following methods:
 - i. The volume of runoff produced from an 85th percentile 24-hour storm event;
 - ii. The volume of runoff produced by the 85th percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice;³ or,

² All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code, § 6700 et seq.).

³ Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, cited in chapter 5 (1998 Edition) and Cited in Chapter 3 (2012 Edition) .

- iii. The volume of annual runoff based on unit basin storage volume, to achieve 90 percent or more volume treatment by the method recommended in the latest edition of California Stormwater Best Management Practices Handbook.⁴
- e. Flow-based BMPs: The Applicant shall calculate the flow needed to be treated using one of the following methods:
 - i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch/hr for each hour of a storm event;
 - ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,
 - iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.
- 58. The Applicant shall always prioritize the use of design pollution prevention, landscape and soil-based BMPs to treat storm water runoff. Other BMPs (e.g. sand filters, infiltration basins, treatment and filter systems) may be used only after landscape and soil-based BMPs are determined to be infeasible, and approval is obtained from the State Water Board. When seeking approval from the State Water Board, HSRA shall document the infeasibility of using landscape and soil-based BMPs, or document that there will be fewer water quality impacts through the use of other BMPs.

Hydromodification

- 59. The Applicant shall ensure that development sites do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Unstable stream channels negatively impact water quality by yielding much greater quantities of sediment than stable channels.

The Applicant shall employ the risk-based approach detailed in this Certification to assess lateral and vertical stability. The approach assists the Applicant in assessing pre-development site channel stability and implementing mitigation measures that are appropriate to protect structures and minimize stream channel bank and bed erosion.

- a. Rail or non-rail facility development sites that create 5,000 square feet to 1 acre of disturbed soil area must implement design pollution prevention BMPs, as described in this Certification at Provision 60.
- b. Rail or non-rail facility development sites that create 1 acre or more of disturbed soil area completely outside of a threshold drainage area must implement Design Pollution Prevention BMPs as specified in Provision 60 and post-construction treatment control BMPs as specified in Provision 56. A threshold drainage area is defined as the area

⁴ California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. <<http://www.casqa.org/>>. [as of July 3, 2013].

draining to a location at least 20 channel widths downstream of a stream crossing (i.e., pipe, swale, culvert, or bridge) within the construction footprint. Delineating the threshold drainage area is not necessary if there are no stream or natural drainage crossings within the construction footprints.

Rail or non-rail facility development sites that create 1 acre or more of disturbed soil area completely outside of a threshold drainage area shall also be constructed to preserve the pre-development site drainage density (miles of stream length per square mile of drainage area) for all drainage areas within an area serving a first order stream or larger stream, and to ensure that post-development site time of runoff concentration is equal or greater than pre-development site time of runoff concentration. Time of runoff concentration is defined as the time needed for water to flow from the most remote point on a project site to the project site outlet.

To meet the drainage density requirement, the Applicant shall maximize sheet flow and use an "open" drainage system (i.e., swales, ditches, vegetated channels) for concentrated flows wherever possible. Sheet flow areas, swales, ditches, and vegetated channels are not considered streams for the purpose of calculating drainage density. Because of the nature of the HST system as a linear transportation corridor, it is not anticipated that the Project will increase the drainage density. Local relocations of existing irrigation channels or natural streams may require new structures to cross the HST system. It is not anticipated that the new structures will affect stream drainage density.

To meet the time of runoff concentration requirements, the Applicant shall use the recommended method in the applicable local hydraulic design or flood control manual. If a recommended method does not exist, the Applicant shall use the time of runoff concentration calculation method contained in the Natural Resources Conservation Service's Technical Release 55: Urban Hydrology for Small Watersheds (Natural Resources Conservation Service 1986).

Hydrology maps must be prepared as part of the post-development WQMP to show threshold drainage areas and calculations required for BMP sizing.

- c. Rail or non-rail facility development sites that create one acre or more of disturbed soil area with any portion of the development site located within a threshold drainage area must conduct a rapid assessment of natural stream stability (i.e., Level 1 stream assessment) according to Guidance and worksheets used for the rapid assessment of stream stability in the Federal Highway Administration (FHWA) publication "*Assessing Stream Channel Stability at Bridges in Physiographic Regions*" (FHWA, 2006) at each stream crossing (i.e., pipe, culvert, swale or bridge) within that threshold drainage area. If the stream crossing is a bridge, a follow-up rapid assessment of stream stability is also required and can be coordinated with the federally mandated bridge inspection process. The assessment will be conducted within a representative channel reach to assess lateral and vertical stability. A representative reach is a length of stream channel that extends at least 20 channel widths upstream and downstream of a stream crossing. For example, a 20-foot-wide channel will require analyzing a 400-foot distance both upstream and downstream of the discharge point or bridge (800 feet total). If sections of the channel within the 20-channel-width distance are immediately upstream or downstream of steps, culverts, grade controls, tributary junctions, or other features and structures that significantly affect the shape and behavior of the channel, more than 20

channel widths should be analyzed. Guidance and worksheets used for the rapid assessment must be documented in the post-development WQMP.

- d. If the results of the rapid assessment indicate that the representative reach is laterally and vertically stable (i.e., a rating of excellent or good) the Applicant is not required to conduct further analyses, but must comply with Provision 58.b..
 - e. If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., does not score a rating of excellent or good), the Applicant shall determine whether the instability, in conjunction with the proposed development site, poses a risk to existing or proposed rail-line or existing highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. The Applicant shall follow the Level 2 and 3 analysis guidelines contained in Hydraulic Engineering Circular No. 20 (HEC-20) (FHWA, April 2012) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary Level 3) analyses indicate that there is no risk to existing or proposed rail-line or existing structures, the Applicant shall comply with Provision 58.b. and shall document the methodologies used and the results.
 - f. If the results of the Level 2 and 3 analysis indicate that the instability, in conjunction with the proposed development site, poses a risk to existing or proposed rail-line or existing structures, other options as specified in HEC-20 must be proposed, including, but not limited to, stream bed and bank stabilization required to protect HST system structures and other structures affected by the development site, and if necessary, project re-design for approval by the State Water Board Executive Director.
60. The Project is a design-build project, and final design features are not yet fully known. Some elements of the final design may involve the creation, addition, and/or replacement of impervious surface on an already developed site; i.e., redevelopment. Examples include the expansion of a building footprint, road widening, the addition or replacement of a structure, and creation or addition of impervious surfaces. The following Scope of Design Criteria must apply to all Project elements that involve redevelopment.
- a. Where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-development site impervious area of an existing development, the numeric sizing criteria shall only apply to the new impervious area and not to the entire Project. If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the HSRA shall provide treatment for existing and redeveloped areas.
 - b. Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-development site impervious area of an existing development, the numeric sizing criteria apply to the entire Project.

BMP Design Requirements for Post-Construction Treatment Control

61. The Applicant shall include BMPs that will reduce discharges of pollutants to the Maximum Extent Practicable (MEP) in the post-construction design specifications for all Project components to be constructed. These standards shall at a minimum, include the following:

- a. Source Control Requirements – The Applicant shall implement permanent and/or operational source control BMPs to address the following pollutant sources, as applicable:
 - i. Accidental and illicit discharges to on-site storm drain inlets;
 - ii. Interior floor drains and elevator shaft sump pumps;
 - iii. Interior parking garages;
 - iv. Indoor and structural pest control;
 - v. Landscape/outdoor pesticide use;
 - vi. Refuse areas;
 - vii. Industrial processes;
 - viii. Outdoor storage of equipment or materials;
 - ix. Vehicle and equipment cleaning;
 - x. Vehicle and equipment repair and maintenance;
 - xi. Fuel dispensing areas;
 - xii. Loading docks;
 - xiii. Fire sprinkler test water;
 - xiv. Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources.
 - b. Design Pollution Prevention BMPs – The Applicant shall include the following pollution-prevention BMPs in the design specifications of all projects that create disturbed soil area (DSA), for projects designed to meet the Post-Construction requirements above. The WQMP shall be updated to reflect these principles:
 - i. Conserve natural areas, to the extent feasible, including existing trees, stream buffer areas, vegetation and soils;
 - ii. Minimize the impervious footprint of the Project;
 - iii. Minimize disturbances to natural drainages;
 - iv. Design and construct pervious areas to effectively receive runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope and other pertinent factors;
 - v. Implement landscape and soil-based BMPs such as compost-amended soils and buffer strips taking into consideration the pervious areas' soil conditions, slope and other pertinent factors;
 - vi. Use climate-appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers;
 - vii. Design all landscapes to comply with the California Department of Water Resources Water Efficient Landscape Ordinance or, if applicable, any more stringent local water conservation ordinance.
<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm>
62. In the WQMP, the Applicant shall include a description of how post-construction treatment control BMPs will be developed, constructed and maintained, and shall apply, as appropriate, the following criteria:

- a. Vector Control
- i. All post-construction treatment control BMPs that retain storm water must be designed, operated and maintained to minimize mosquito production, and to drain within 96 hours of the end of a rain event, unless designed and maintained to control vectors. Proprietary BMPs shall be maintained at the frequency specified by the manufacturer. The Applicant shall operate and maintain all BMPs to prevent the propagation of vectors, including complying with applicable provisions of the California Health and Safety Code relating to vector control.
 - ii. The Applicant shall cooperate and coordinate with the California Department of Public Health (CDPH) and with local mosquito and vector control agencies on issues related to vector production in the Applicant's structural BMPs. The Applicant shall prepare and maintain an inventory of structural BMPs that retain water for more than 96 hours. The inventory must be provided to CDPH in electronic format for distribution to local mosquito and vector control agencies. The inventory must be provided as part of the second annual report and updated every two years.
- b. Post-construction treatment control BMPs must be implemented in accordance with the following criteria:
- i. The Applicant shall inspect all newly installed post-construction treatment control BMPs within 45 days of installation to ensure they have been installed and constructed in accordance with approved plans. If approved plans have not been followed, the Applicant shall take appropriate remedial actions to bring the BMP into conformance with its approved design.
 - ii. The Applicant shall inspect all installed structural post-construction treatment control BMPs at least once every year after installation.
 - iii. The Applicant may route discharge from post-construction treatment control BMPs to the MS4 if the discharge complies with the applicable MS4 permit requirements. Retained sediments must be disposed of properly, in compliance with all applicable local, State, and federal acts, laws, regulations, ordinances, and statutes.
 - iv. The Applicant shall develop and utilize a watershed-based database or tracking spreadsheet to track and inventory post-construction treatment control BMPs installed and structural treatment BMP maintenance within its jurisdiction. At a minimum, the database must include:
 - Name and location of structural treatment BMP;
 - Watershed and Regional Water Board where project is located;
 - Size and capacity;
 - Treatment BMP type and description;
 - Date of installation;
 - Maintenance certifications or verifications;
 - Inspection dates and findings;
 - Compliance status;
 - Corrective actions, if any; and

- Follow-up inspections to ensure compliance.
- v. Electronic reports for each structural treatment BMP inspected during the reporting period must be submitted to the State Water Board electronically into Storm Water Multiple Application and Reporting Tracking System (SMARTS).
- vi. Structural post-construction treatment control BMPs must not constitute a hazard to wildlife.
63. The Applicant shall utilize wildlife-friendly 100 percent biodegradable erosion control products wherever feasible in BMPs for post-construction treatment control. For purposes of this Certification, photodegradable synthetic products are not considered biodegradable. At any site where erosion control products containing non-biodegradable materials have been used for temporary site stabilization, the Applicant shall remove such materials when they are no longer needed. If the Applicant finds that erosion control netting or products have entrapped or harmed wildlife at any site or facility, the Applicant shall remove the netting or product and replace it with wildlife-friendly biodegradable products within 15 days.
64. The Applicant shall evaluate pesticides, herbicides and fertilizers used and application activities performed in BMPs for post-construction treatment control and identify pollution prevention and source control opportunities, and must implement practices that reduce the discharge of pesticides, herbicides and fertilizers to the MEP. At a minimum the Applicant shall:
- a. Implement educational activities for applicators and distributors.
 - b. Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area.
 - c. Implement landscape management measures that rely on non-chemical solutions, including:
 - i. Create drought-resistant soils by amending soils with compost.
 - ii. Create soil microbial community through the use of compost, compost tea, or inoculation.
 - iii. Use native and climate appropriate plants to reduce the amount of water, pesticides, herbicides and fertilizers used.
 - iv. Practice grass cycling on decorative turf landscapes to reduce water use and the need for fertilizers.
 - v. Keep grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling.
 - vi. Prevent application of pesticides, herbicides and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50 percent probability as predicted by NOAA.

- vii. Limit or replace herbicide and pesticide use (e.g., conducting manual weed and insect removal).
 - viii. Prohibit application of pesticides, herbicides and fertilizers within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body.
 - ix. Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
 - x. Reduce mowing of grass to allow for greater pollutant removal, to the extent feasible while providing for public safety and fire/fuels management.
 - xi. Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.
65. The Applicant shall maintain a daily log to note the presence and absence of waste releases from vehicles and equipment, except those related to the regular operation of the train. Copies of the daily log must be available upon request.

STATE WATER BOARD STAFF CONTACT PERSON:

All reports, notification, other required communications regarding this certification and questions must be directed to the designated staff contact: State Water Board Environmental Scientist Cliff Harvey at (916) 558-1709, via e-mail at clifford.harvey@waterboards.ca.gov, or by mail at:

Cliff Harvey, Environmental Scientist
State Water Resources Control Board
401 Certification and Wetland Program
1001 I Street, 15th Floor
P.O. Box 100
Sacramento, CA 95812-2000

You may also contact Bill Orme, Chief of the 401 Certification and Wetlands Protection Unit, at (916) 341-5464, via e-mail at bill.orme@waterboards.ca.gov, or at the address shown above.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

On May 3, 2012, the HSRA, as lead agency, certified a FEIR (State Clearinghouse (SCH) No. 2009091125) for the *California High Speed Train, Merced to Fresno Section* in accordance with CEQA (Resolution No. HSRA 12-19). HSRA subsequently selected the "Hybrid Alternative" for the proposed Project and issued its Findings and Statements of Overriding Considerations.

In making its determinations and findings, the State Water Board presumes that the HSRA's certified environmental document comports with the requirements of CEQA and is valid. (Pub. Resources Code, § 21167.3, subd. (b).) State Water Board staff has reviewed and considered the FEIR/FEIS and proposed mitigation measures and finds that the FEIR/FEIS provided by HSRA is adequate. An MMRP is in place to document the mitigation measures and how they are to be implemented.

The *State Water Resources Control Board CEQA Findings and Statements of Overriding Considerations* (Attachment G) includes findings to be adopted by the State Water Board pursuant to section 15096 of title 14 of the California Code of Regulations, in conjunction with the approval of this Certification.

WATER QUALITY CERTIFICATION:

I hereby issue an Order certifying that as long as all of the conditions listed in this Certification action are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards). This discharge is also regulated pursuant to State Water Board Water Quality Order 2003-0017-DWQ which authorizes this Certification to serve as Waste Discharge Requirements pursuant to the Porter-Cologne Water Quality Act (Wat. Code § 13000 et seq.). Except insofar as may be modified by any preceding conditions, this Certification is contingent upon (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of the Certification and the attachments to this Certification, (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Central Valley Regional Water Board's Water Quality Control Plans and Policies and (c) the CEQA documentation cited in the findings above.

Thomas Howard
Thomas Howard
Executive Director
State Water Resources Control Board

4/10/14
Date

- Attachments (7): Attachment A. Signatory Requirements
 Attachment B. Project Information
 Attachment C. Project Area Maps
 Attachment D. Certification Deviation Procedures
 Attachment E. Mitigation Ratios
 Attachment F. Financial Assurances
 Attachment G. CEQA Findings and Statement of Overriding Considerations

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment A

Signatory Requirements

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SIGNATORY REQUIREMENTS

*All Documents Submitted In Compliance With This Order
Shall Meet The Following Signatory Requirements:*

1. All applications, reports, or information submitted to the State Water Resources Control Board (State Water Board) must be signed and certified as follows:
 - (a) For a corporation, by a responsible corporate officer of at least the level of vice-president.
 - (b) For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 - (c) For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
2. A duly authorized representative of a person designated in Items 1.a through 1.c above may sign documents if:
 - (a) The authorization is made in writing by a person described in Items 1.a through 1.c above.
 - (b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - (c) The written authorization is submitted to the State Water Board Executive Director.
3. Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

California High Speed Rail Project
Merced to Fresno Segment
Permitting Phase 1

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment B

Project Information

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Project Identifiers	
WDID No:	
Reg. Meas. ID:	
Place ID:	
Party ID:	
USACOE No:	
Other File No:	

PROJECT INFORMATION	
Details	
Application Received Date:	May 17, 2013
Application Completed Date:	June 17, 2013
Additional Info Completed Date:	
Applicant:	California High-Speed Rail Authority c/o Mark McLoughlin
Applicant Representative(s):	CH2M HILL c/o Mark Oliver
Project Title:	California High-Speed Train (HST Project), Merced to Fresno Section, Permitting Phase 1 (PP1)
Regulating Water Board:	State Water Resources Control Board
Type of Project:	Railroads
Project Description:	Applicant proposes construction of a 24 mile section of the California High Speed Rail System, between Madera and Fresno. The proposed project is Permitting Phase 1 (PP1).
Location	
City:	Vicinity of Madera and Fresno
County:	Madera and Fresno County
Cross Streets:	Area from Avenue 17 in Madera County to immediately south of the Downtown Fresno Station, south of SR 41 adjacent to Los Angeles Street in Fresno, California.
Section, Township, Range:	
Zip code:	No street address is associated with PP1. The project is located between Avenue 17 in Madera, CA and State Route 41 in Fresno, CA.
Directions:	PP1 northern end: County Road Avenue 17, 3.2 miles west of State Highway 99, at the terminus at the BNSF railroad. PP1 southern end: The proposed Fresno Station, centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west.
Latitude(s) and Longitude(s):	Merced County; Latitude 36°59'43.56"N, Longitude 120°2'34.34"W to Fresno County; Latitude 36°43'25.66"N, Longitude 119°47'3.50"W.
Public Notice	
Water Board Public Notice:	Information regarding this project was noticed on the State Water Board's website from May 17, 2013 to _____ date of issuance of certification. One comment was received.



Application Fee Provided: A certification fee of \$945.00 was submitted on 7/1/2013 as required by 23 CCR § 3833b(2)(A) and by 23 CCR § 2200(e). An additional fee of \$50914.00 (IF APPLICABLE) to offset additional design impacts was received on 8/8/2013 as required by 23 CCR § 3833b(2)(A) and by 23 CCR § 2200(e).

(Total certification fee was calculated as: \$40,849.00. The base fee of \$945.00, was received by the Division of Water Quality (DWQ) July 1, 2013. A dredge and fill fee of \$50,914.00 was received by DWQ on August 8, 2013. The State Water Board will issue a refund for any overpayment after issuance of the certification.)

Hydrologic Information

Receiving Water(s):	See Table 8a, Waterbodies in the PP1 Study Area, of the Section 401 Water Quality Certification Application Supplemental Information.										
Hydrologic Unit(s):	San Joaquin Valley Floor Hydrologic Unit (545) and South Valley Floor Hydrologic Unit (551).										
Water Body Type(s):	Vernal pools, seasonal wetland, natural watercourses, constructed watercourses, constructed basins and open waters.										

Designated Beneficial Use(s)

X	AGR		COMM		FRSH	X	MIGR	X	RARE	X	SPWN	
	AQUA		CUL	X	GWR	X	MUN	X	REC-1	X	WARM	
	ASBS		EST	X	IND		NAV	X	REC-2		WET	
	BIOL		FISH		LWRM		POW		SAL	X	WILD	
X	COLD		FLD		MAR		PRO		SHELL		WQE	

Candidate, Sensitive, or Special Status Species

Listed species present or potentially present in PP1 include San Joaquin kit fox, the central California tiger salamander, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, Greene's tectoria, and succulent owl's clover (see USFWS BO provided with Other Requisite Material that accompanies the 401 application package). Also see Section 7, Threatened and Endangered Species, of the Section 401 Water Quality Certification Application Supplemental Information.

Other Permits/Licenses/Agreements/Plans

Federal (Type and Permit/License Number):

- >U.S. Army Corps of Engineers (Corps) Section 404 Individual Permit Application, Permitting Phase 1, U.S. Army Corps of Engineers File No. SPK-2009-01483.
- >Corps Section 408 Determination.
- >U.S. Fish and Wildlife Service (USFWS) Biological Opinion.

State (Type and Permit/License/Agreement Number):

- CDFW Master Streambed Alteration Agreement (MSAA) for PP1 pursuant to Section 1602 of the California Fish and Game Code. (Notification requesting an MSAA has been submitted to CDFW.)
- State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities [Order No. 2009-0009-DWQ; as amended by 2010-0014-DWQ and 2012-0006-DWQ; NPDES No. CAS000002 (2009)] (CGP).
- CDFW Incidental Take Permit (ITP) pursuant to Section 2081 of the California Fish and Game Code. (ITP application has been submitted to CDFW.)
- CVFPB Encroachment Permits. (These permits will be obtained by the Design/Build (D/B) contractor during design/construction of the HST Project.)
- State Water Board Water Quality Order No. 2003-003-DWQ, Statewide General Waste Discharge



Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality (General WDRs). (If necessary, this permit will be obtained by the D/B contractor during design/construction of the HST Project.)

- RWQCB - Central Valley Region, Order No. R5-2008-0081, Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters. (This permit will be obtained by the D/B contractor during design/construction of the HST Project.)
- Caltrans Encroachment Permits. (These permits will be obtained by the D/B contractor during design/construction of the HST Project.)

Other County, City, etc. (Type and Permit/License Number):

See Table 4.1, Other Authorizations, of the Section 401 Water Quality Certification Application Supplemental Information.

Any Required Documents or Plan Submittals (SWPPP, Mitigation & Monitoring, etc.)

-->Submittal of SWPPP not required for Certification. Documentation of enrollment under the CGP is required. The D/B contractor will prepare the project SWPPP.

NEPA and/or CEQA Compliance

Document Type:	EIR/EIS
Lead Agency:	California High-Speed Rail Authority (Authority) (note: Federal Railroad Administration (FRA) is lead for NEPA compliance)
Date Completed:	Notice of Determination filed May 4, 2012
State Clearinghouse Number:	2009091125

IMPACTS

Describe Potential Water Quality Impacts:

Primary impacts include: Direct impacts due to fill of wetlands by the rail bed; alteration of flow caused by stream crossings; potential polluted runoff from the rail lines and facilities; indirect impacts due to operation and maintenance of the rail lines and associated facilities. See Section 5, Water body Impact, of the Section 401 Water Quality Certification Application Supplemental Information.

Final Project Impacts (Fill)*

See Block 8b, Fill and Excavation, of the Section 401 Application form.

Water Body Type	Permanent			Temporary		
	Acres**	Linear Feet	Cubic Yards	Acres**	Linear Feet	Cubic Yards
Lake						
Ocean						
Riparian	1.330	875		0.600	620	
Streambed	1.793	895		1.910	905	
Vernal Pool	1.282					
Wetland	3.102			2.590		

* Include all three measurements (acres, linear feet and cubic yards) for all federal and non-federal water body types.

** Provide acres to three decimal places (e.g., 0.006).

Final Project Impacts (Dredge*/Excavation)**

See Block 8c, Dredging, of the Section 401 Application form.

Water Body Type	Permanent			Temporary		
	Acres***	Linear Feet	Cubic Yards	Acres***	Linear Feet	Cubic Yards
Lake						
Ocean						
Riparian						
Streambed						
Vernal Pool						
Wetland						

* For projects that will occur annually please provide the total volume to be dredged for the entire certification period (typically 5 years).

** Include all three measurements (acres, linear feet and cubic yards) for all federal and non-federal water body types.

*** Provide acres to three decimal places (e.g., 0.006).

Impact Comparison*

	Fill				Dredge			
	Permanent		Temporary		Permanent		Temporary	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Impacts (Acres)**	8.345	7.507	2.476	2.476				

* Include impacts to both federal and non-federal waters.

** Provide acres to three decimal places (e.g., 0.006).

Mitigation

Describe Avoidance and Minimization for Impacts to Waters:

See Section 11.1, Avoidance and Minimization, of the Section 401 Water Quality Certification Application Supplemental Information.

Describe Compensatory Mitigation for Impacts to Waters (temporary and permanent):

A permittee responsible mitigation plan calls for off-site preservation, enhancement and restoration of wetlands, stream channels and vernal pools within the watersheds where the project is proposed. See Section 6, Compensatory Mitigation, of the Section 401 Water Quality Certification Application Supplemental Information.

Compensatory Mitigation (Proponent Provided)

Water Body Type	Acres Established		Acres Restored		Acres Enhanced		Acres Preserved	
	Temp.*	Perm.	Temp.*	Perm.	Temp.*	Perm.	Temp.*	Perm.**
Lake								
Ocean								
Riparian			0.390	2.200				
Streambed			2.086	0.000				
Vernal Pool				8.350				12.030
Wetland								

* Report as mitigation for temporary impacts at a 1:1 ratio any required conditions to restore the site (e.g., re-vegetating or re-contouring). Temporary impacts are being mitigated at the project site.

** This preservation is for compliance with the federal Endangered Species act and not for waters of the U.S./waters of the state.

Compensatory Mitigation (Mitigation Bank)

N/A				
Water Body Type	Acres Established	Acres Restored	Acres Enhanced	Acres Preserved
Lake				
Ocean				
Riparian				
Streambed				
Vernal Pool				
Wetland				
Compensatory Mitigation (In-Lieu)				
N/A				
Water Body Type	Acres Established	Acres Restored	Acres Enhanced	Acres Preserved
Lake				
Ocean				
Riparian				
Streambed				
Vernal Pool				
Wetland				
Proponent Provided Mitigation Information (If Applicable)*				
See Additional Mitigation Information (Proponent, Bank, or In-Lieu) below				
	Site 1	Site 2		
Mitigation Site Location(s):	See Below			
Mitigation Site Lat/Long(s):				
Name of Watershed & Hydrologic Unit:				
Mitigation Site City and County:				
*If more than two sites, please provide additional information in the additional information table located at the end of this form.				
Mitigation Bank Information (If Applicable)*				
N/A				
	Bank 1	Bank 2		
Mitigation Bank Name:	N/A			
Name of Mitigation Bank Operator:				
Address of Mitigation Bank Office:				
Mitigation Bank Location(s):				
Mitigation Bank Lat/Long(s):				
Name of Watershed & Hydrologic Unit:				
Mitigation Bank City and County:				
Mitigation Purchase Amount (\$):				
*If more than two sites, please provide additional information in the additional information table located at the end of this form.				

In-Lieu Mitigation Information (If Applicable)*	
N/A	

	Program 1	Program 2
Name of Approved In-Lieu Fee Mitigation Sponsor:	N/A	
Address of In-Lieu Mitigation Sponsor:		
Description of In-Lieu Mitigation Arrangements:		
In-Lieu Mitigation Location:		
In-Lieu Mitigation Lat/Long(s):		
In-Lieu Mitigation City and County:		
Name of Watershed & Hydrologic Unit:		

*If more than two sites, please provide additional information in the additional information table located at the end of this form.

Additional Mitigation Information (Proponent, Bank, or In-Lieu)

	Site 1	Site 2
Mitigation Site Name:	Lazy K	
Name of Mitigation Site Operator:	John Vollmar / Vollmar Natural Lands Consulting	
Address of Mitigation Site Office:	1720 Solano Ave Berkeley, CA 94707	
Mitigation Site Location(s):	The Lazy K mitigation site is located at the northwestern edge of Madera County and the southern edge of Merced County, approximately 5 miles east of the City of Chowchilla, 15 miles north of the City of Madera, and 5 miles south of Le Grand in Merced County.	
Mitigation Site Lat/Long(s):	The approximate center of the site is latitude 37°9'48.31"N, longitude 120°9'10.10"W.	
Name of Watershed & Hydrologic Unit:	The site is located in the Chowchilla River watershed of the Middle San Joaquin-Lower Chowchilla River hydrologic unit, within the San Joaquin River Basin hydrologic unit.	
Mitigation Site City and County:	Madera and Merced Counties	
Mitigation Purchase Amount (\$):	Not yet available.	

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment C

Project Area Maps

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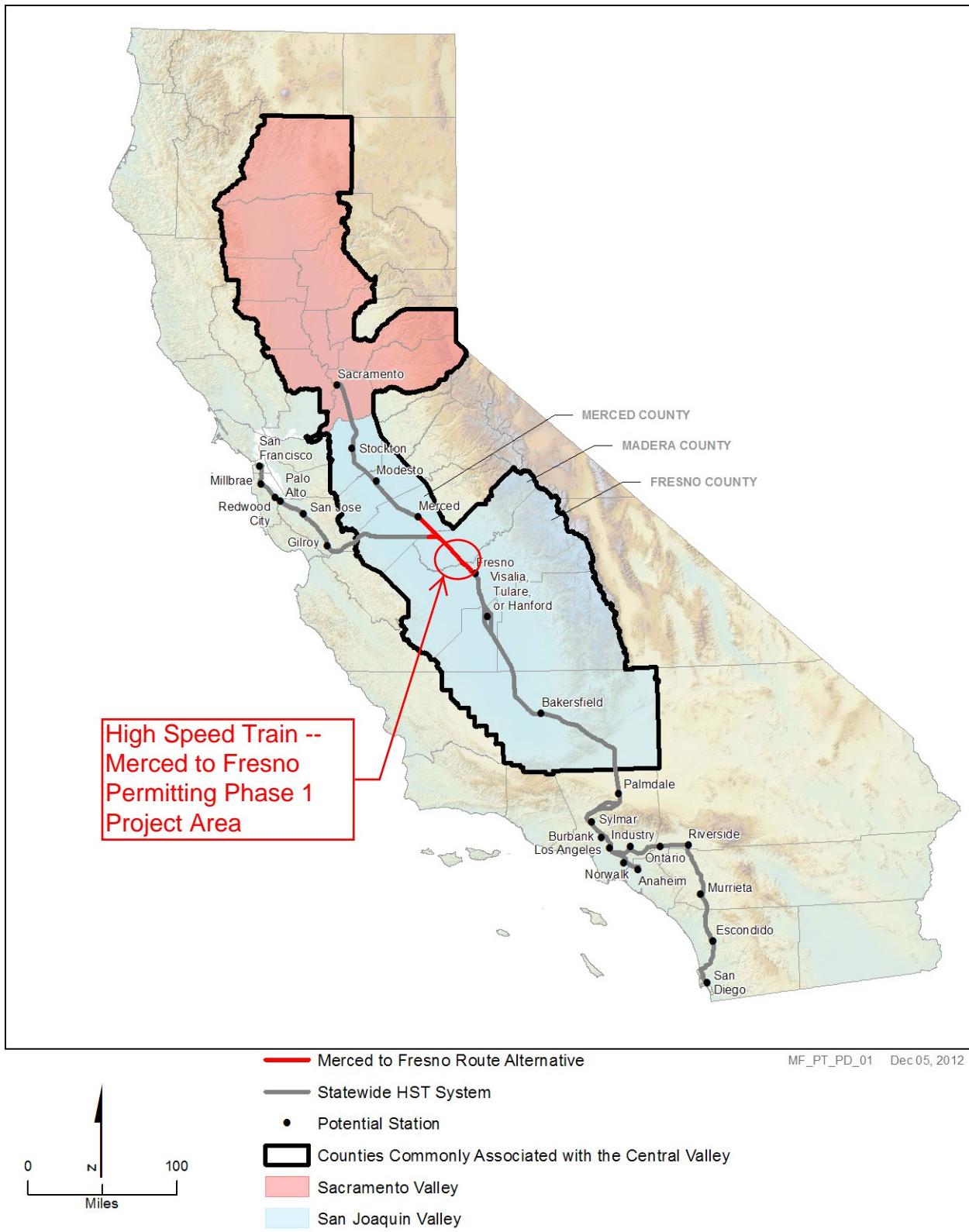
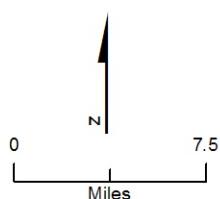
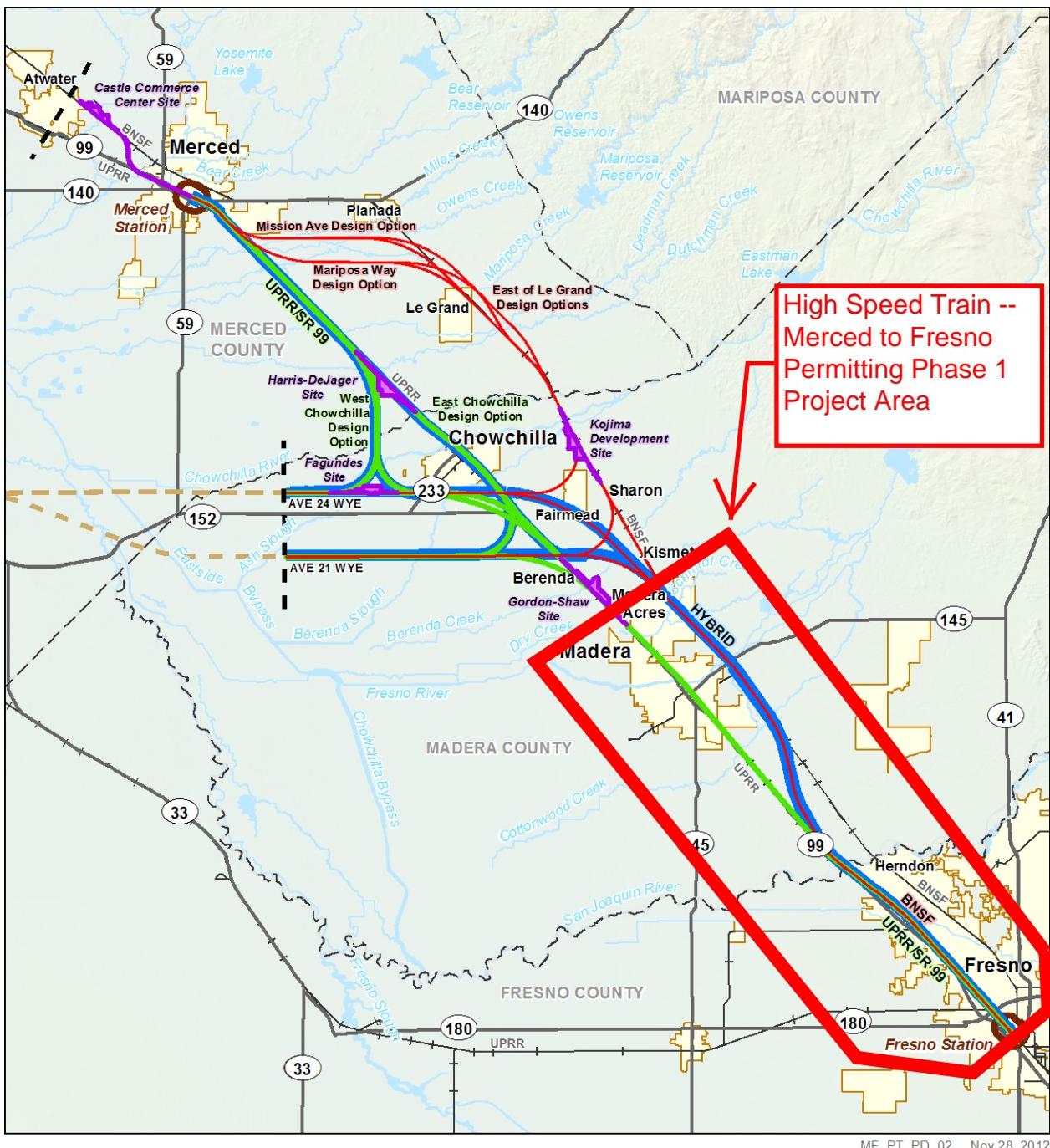


Figure 1-1
California HST System



- BNSF Alternative
- UPRR/SR 99 Alternative
- Hybrid Alternative
- - - Project Limit
- - Connection to Other Section
- Station Study Area
- Potential Heavy Maintenance Facility
- City Limit
- - - County Boundary
- + Railroad
- State / US Highway

Figure 1-2
Alternatives Considered in
Merced to Fresno Section EIR/EIS

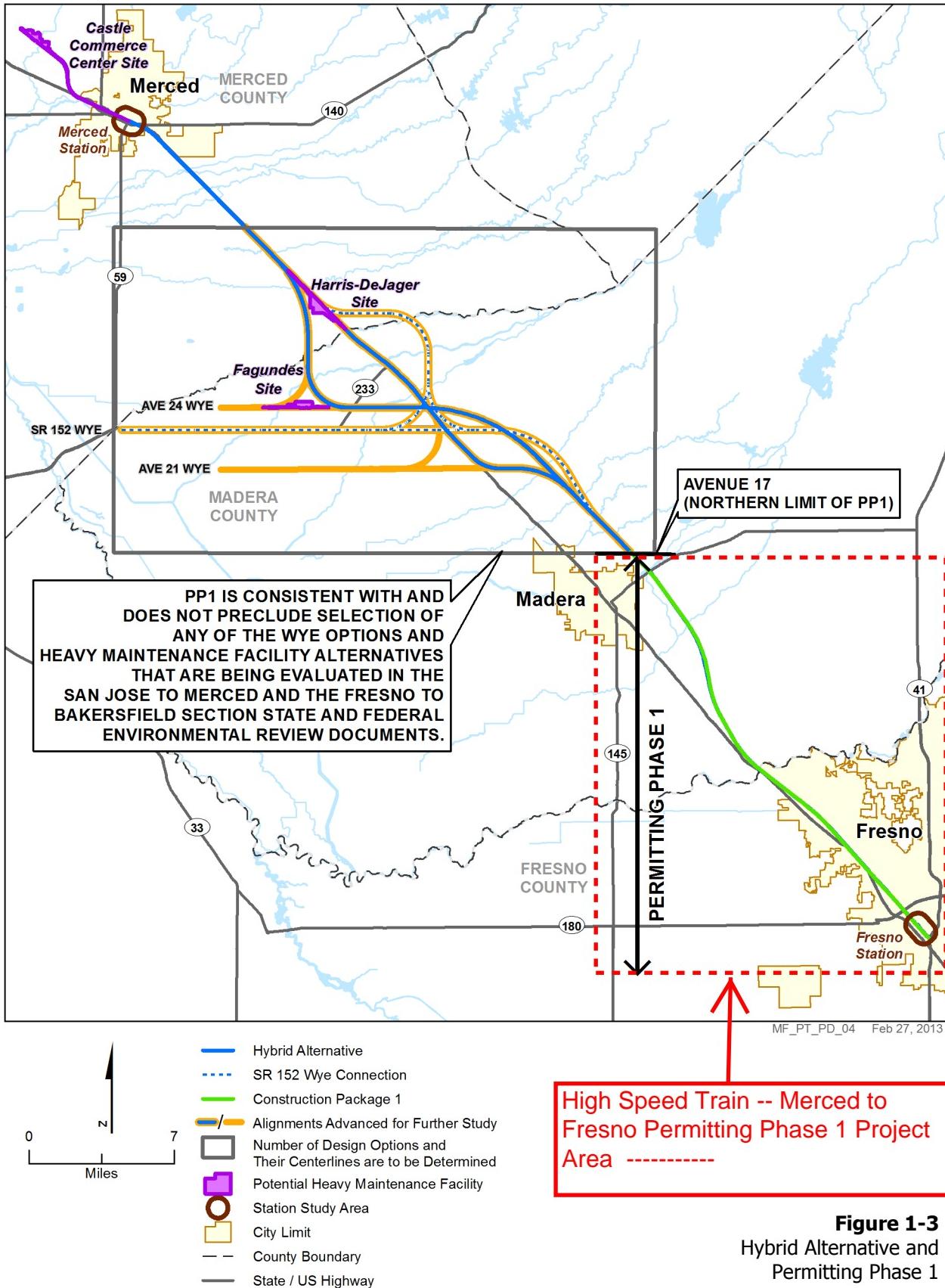


Figure 1-3
Hybrid Alternative and
Permitting Phase 1

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment D

Certification Deviation Procedures

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Introduction

These procedures are put into place to preclude the need for certification amendments for minor changes in the Project routing or location. Often minor changes or modifications in project activities are required by the permittee following start of construction. These deviations may potentially increase or decrease impacts to waters of the state. In such cases, a Certification Deviation, as defined in Additional Condition 9, may be requested by the High Speed Rail Authority (HSRA) as set forth below:

Process Steps

Who may apply: The HSRA or its designated representative for this Certification.

How to apply: By letter or email to the 401 staff designated as the contact for this Certification.

Certification Deviation Request: The HSRA or its agent will request verification from State Water Board staff that the project change qualifies as a Certification Deviation, as opposed to requiring an amendment to the Certification. The request should:

1. Describe the Project change or modification:
 - a. Proposed activity description and purpose;
 - b. Why the proposed activity is considered minor in terms of impacts to waters of the state;
 - c. How the Project activity is currently addressed in the Certification; and,
 - d. Why a Certification Deviation is necessary for the Project.
2. Describe location (latitude/longitude coordinates), the date(s) it will occur, as well as associated impact information (i.e., temporary or permanent, federal or non-federal jurisdiction, water body name/type, estimated impact area, etc.) and minimization measures to be implemented.
3. Provide a map that includes the activity boundaries with photos of the site.
4. Provide verification of any mitigation needed according to the Certification conditions.
5. Provide verification from the CEQA Lead Agency that the proposed changes or modifications do not trigger the need for a subsequent Negative Declaration or EIR, or a supplemental EIR. (Cal. Code Regs., tit. 14, §§ 15162 & 15163.)

Action by State Water Board on Request: State Water Board staff will make a determination on the Certification Deviation request within 5 working days from receipt of a complete request and notify the HSRA or its agent via email of the staff determination. Whether or not a Certification Deviation request is complete is at the discretion of State Water Board staff.

Post-Construction Certification Deviation Reporting:

1. Within 30 calendar days of completing the approved Certification Deviation activity, the HSRA or its agent will provide a post-construction activity report that includes the following information:
 - a. Activity description and purpose;
 - b. Activity location, start date, and completion date;

Certification Deviation Procedures

- c. Erosion control and pollution prevention measures applied;
- d. Impacts to water body types if applicable;
- e. Mitigation plan if applicable; and,
- f. Map of activity location and boundaries; post-construction photos.

Action by State Water Board on Post-Construction Activity Report: State Water Board staff will review the post-construction Certification Deviation Report within 10 working days from receipt of a complete report. State Water Board staff will determine, in consultation with the HSRA and other regulatory agencies, if applicable, whether additional mitigation will be required. If additional mitigation is required, State Water Board staff will inform the HSRA within the 10-day review period. Whether or not a post-construction activity report is complete is at the discretion of State Water Board staff.

Annual Summary Deviation Report:

1. By January 31 of each year until the Project terminates construction activities, the HSRA or its agent will provide an Annual Summary Deviation Report that will include the following information in an excel spreadsheet (or similar format) for all Certification Deviation activities conducted for the previous calendar year (i.e., January 1 through December 31):
 - a. Site name(s);
 - b. Date(s) of Certification Deviation approval;
 - c. Location(s) of authorized activities;
 - d. Impact area(s) by water body type prior to activity (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards) as originally authorized in the Certification;
 - e. Actual impact area(s) by water body type (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards) due to Certification Deviation activity(ies);
 - f. The net change in impact area by water body type(s) (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards). An explanation will be required for any negative values; and,
 - g. Mitigation to be provided (approved mitigation ratio and amount).

Action by State Water Board on Annual Certification Deviation Report: Following termination of Project construction, the State Water Board will amend the Certification to reflect all approved Certification Deviations and the amended Certification will serve as a record of actual Project activities.

ECM: 1090352

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment E

Mitigation Ratios

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Compensatory Mitigation Ratios for California High Speed Train Permitting Phase 1												
			Watershed		401 Impacts			Site I.D. numbers				
	401 IMPACT TYPE	CORPS IMPACT TYPE	USGS "8 digit" HUC ¹	Basin Plan HUC ¹	Acres of Impact	Acres of Mitigation	Mitigation Ratio ²					
"Streams"	Natural Watercourse	Riverine High CRAM (Bridge)	18040001 18040007	545	0.020	0.027	1.35:1	11790				
	Natural Watercourse	Riverine Mid CRAM (Bridge)	180400011 8040007	545	0.012	0.016	1.35:1	11795, 11800				
	Constructed Watercourse	Canal/Ditch	18040001 18040007	545	0.741	0.741	1:1	161, 163, 168, 169, 175, 7156, 7951, 9298				
"Wetlands"	Constructed Watercourse	Canal/Ditch	18030009	551.3	1.020	1.020	1:1	156, 8214, 9314, 9341, 9342, 9344, 9936				
	Vernal Pool Wetlands	Vernal Pool High CRAM	18040001 18040007	545	1.282	3.167	2.47:1	5151, 5154, 11299				
	Seasonal Wetland	Seasonal Wetland	18040001 18040007	545	0.351	0.807	2.3	7332				
	Constructed Basin ³	Basin	18040001 18040007	545	0.097	0.097	1:1	7330				
	Constructed Basin	Basin	18030009	551.3	2.656	2.656	1:1	3567, 3571, 8103, 8176, 8181, 8916, 8917, 9345, 9953, 10958				
	TOTAL IMPACTS AND ACREAGE PROPOSED FOR COMPENSATORY MITIGATION				6.179	8.531						
Mitigation amounts and ratios in this table were developed by the applicant in consultation with the Corps and State Water Board. These final mitigation ratios are listed in Table 4-2 of the PRMP.												
Note 1) Hydrologic Unit Code.												
Note 2) These mitigation ratios were developed with the Corps using the Corps' Mitigation Ratio Standard Operating Procedure. Additionally, impacts to non-wetland riparian habitat will be mitigated at a 2:1 ratio. The 1.1 acre of impact to non-wetland riparian habitat associated with San Joaquin River and Cottonwood Creek will result in 2.2 acres of mitigation.												
Note 3) This category of waters, "Constructed Basins" or "Basins," affects constructed depressional features designed and maintained for specific management purposes; i.e., storm water detention or irrigation runoff detention, storage or treatment. Impacts due to fill of these waters will typically be mitigated by reconstruction of the basin in areas adjacent to or near the original location. When rebuilding the basin is not feasible or not requested by the affected landowner, the applicant has agreed to provide additional vernal pool establishment at a reduced ratio. Staff has determined that off-site compensation above that proposed here is un-necessary. HSRA will document landowner preferences leading to decisions to compensate or replace the affected features.												

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment F

Financial Assurances

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Financial Assurances for Implementation and Maintenance of Mitigation.

To reasonably assure implementation of the approved Permittee Responsible Mitigation Plan (PRMP) for the California High Speed Rail Project Merced to Fresno Section Permitting Phase 1 (PP1) as required by this Certification, the California High Speed Rail Authority (CHSRA) shall provide to the State Water Resources Control Board (State Water Board) for approval a form of financial assurance as soon as possible, but no later than one year (12 months) the earlier to occur of: (a) impacts to jurisdictional resources; or (b) six months after the issuance of this amended Certification. The financial assurance instrument(s) shall set forth written documentation that:

1. CHSRA has proper legal authority to spend an appropriate amount of mitigation funding necessary to implement and maintain the mitigation as required by the PRMP and this Certification.
2. CHSRA has approved the expenditure of that amount of mitigation funding necessary for implementing and maintain the mitigation required by the PRMP and this Certification.
3. CHSRA has entered into a covenant or is otherwise obligated to spend that amount of mitigation funding necessary for implementing and maintaining the mitigation required by the PRMP and this Certification. At the election of the State Water Board, prior to submission of the financial assurance instrument(s) to the State Water Board for review, the State Water Board may specify that the document creating CHSRA's covenant or obligation shall include a provision that names the State Water Board as a third party beneficiary entitled to act, in the sole discretion of the State Water Board, to enforce CHSRA's covenant or obligation to expend the mitigation funding necessary for implementing and maintaining the mitigation required by the PRMP and this Certification.
4. The term and contingency measures of the financial assurance instrument(s) shall be sufficient to assure that the financial assurances shall not expire prior to completion of the mitigation and satisfaction of mitigation performance standards pursuant to the PRMP and this Certification.

Long-Term Management Financial Assurances.

To reasonably assure long-term management and protection of the compensatory mitigation areas conserved in perpetuity by a dedicated conservation easement pursuant to the PRMP and this Certification, CHSRA shall provide the following documentation to the State Water Board for approval as soon as possible, but no later than one year (12 months) the earlier of: (a) impacts to jurisdictional resources; or (b) six months after the issuance of this amended Certification:

1. A Property Analysis Record ("PAR") that determines an appropriate endowment value for purposes of funding long-term management and protection of the compensatory mitigation sites in perpetuity as required by the PRMP; and
2. Appropriate financial assurance instrument(s), which shall set forth written documentation that CHSRA has provided endowment or future annuity principle sufficient to fund the long-term management of the compensatory mitigation sites satisfying the following conditions:

- a. The endowment shall provide the sum determined pursuant to the PAR to be sufficient to fund long term management and protection of the compensatory mitigation sites;
- b. The endowment shall be provided by CHSRA to an entity qualified to receive the endowment under California Government Code Section 65968; and
- c. The endowment holder shall be obligated to hold, manage and expend the endowment in perpetuity for long term management and protection of the compensatory mitigation sites as specified in the PRMP.

California High Speed Train Project – Merced to Fresno Permitting Phase 1

Clean Water Act Section 401 Water Quality Certification

Attachment G

CEQA Findings of Fact and Statement of Overriding Considerations

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**State Water Resources Control Board
CEQA Findings of Fact and Statement of Overriding Considerations for the
California High Speed Rail Authority's
High Speed Train – Merced to Fresno Permitting Phase 1 Project**

A. INTRODUCTION

Pursuant to CEQA, these Findings of Fact and Statement of Overriding Considerations (Findings) support the issuance of this Certification based on the Project Final Environmental Impact Report (FEIR), and other supplemental documentation, including, the Project Mitigation Monitoring and Reporting Plan (MMRP) and the application for Certification with attachments. (Cal. Code Regs., tit. 14, §§ 15091 & 15096, subd. (h).) In preparation of the Findings, the State Water Board has utilized the FEIR, as well as the Final Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High Speed Train System (Program EIR) and other relevant material in the State Water Board's administrative record (Cal. Code Regs., tit. 14, § 15096, subd. (f)).

CEQA Finding Requirement

Prior to approving or carrying out a project for which an EIR has been certified which identifies one or more significant environmental effects, all public agencies must make one or more written findings for each of those significant impacts, accompanied by a brief explanation of the rationale for each finding. (Pub. Resources Code, § 21081, subd. (a); Cal. Code Regs., tit. 14, §§ 15091, subd. (a) & § 15082, subd. (b)(2)) This requirement applies to the lead agency and responsible agencies under CEQA (Pub. Resources Code, § 21081; Cal. Code Regs., tit. 14, §§ 15091, subd. (a) & § 15096, subd. (h)). As specified in the CEQA Guidelines, the possible findings are:

- (1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;
- (2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency; or
- (3) Economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR.

The State Water Board is a responsible agency under CEQA for purposes of approving the Certification for Project activities. To that end, these Findings provide the specific reasons supporting the State Water Board's decisions under CEQA as they relate to the issuance of the Project Certification. The Findings are supported by substantial evidence in the State Water Board's administrative record (Cal. Code Regs., tit. 14, § 15091 subd. (b)..).

As a responsible agency, the State Water Board's CEQA obligations are more limited than those of the lead agency. (Cal. Code Regs., tit. 14, § 15096, subd. (g)(1).) The State Water Board, in particular, is "responsible for considering only the effects of those activities involved in

Attachment G

State Water Board CEQA Findings of Fact and Statement of Overriding Considerations High Speed Train-Merced to Fresno Permitting Phase 1 Project

[the] project which it is required by law to carry out or approve." (Pub. Resources Code, § 21002.1, subd. (d).) Thus, while the State Water Board must "consider the environmental effects" of the Project as disclosed in the environmental documents described above, the State Water Board "has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve." (Cal. Code Regs., tit. 14, § 15096, subds. (f), (g)(1).)

B. INCORPORATION BY REFERENCE

All project impacts and mitigation measures, including those discussed below, are analyzed in greater detail in the Project Final EIR (FEIR), which is incorporated herein by reference. The Project FEIR is available at:

http://www.hsr.ca.gov/Programs/Environmental_Planning/final_merced_fresno.html

The Program EIR, which includes analyses of broad statewide HST impacts and serves as a first tier document for the FEIR, is available at:

http://www.hsr.ca.gov/docs/programs/eir-eis/brdmtg1105_item7_8mitigation.pdf

Project mitigation measures and reporting responsibilities are also summarized in the Project Mitigation Monitoring and Reporting Plan (MMRP), which is incorporated herein by reference. The MMRP is available at: http://www.hsr.ca.gov/docs/programs/merced-fresno_eir/final_EIR_MerFres_MMRP_Rev2_A_SIGNED.pdf

Also incorporated by reference into these Findings is High Speed Rail Authority's (HSRA) application for Certification with all attachments, which include detailed project maps, a detailed project description, copies of information provided to other resource agencies, compensatory mitigation ratio-setting methodologies, and other supporting information.

C. ENVIRONMENTAL REVIEW:

On May 3, 2012, the HSRA, as lead agency, certified a Final Environmental Impact Report (State Clearinghouse (SCH) No. 2009091125) for the *California High Speed Train, Merced to Fresno Section* in accordance with CEQA (Resolution # HSRA 12-19). As directed by CEQA, the State Water Board has been deemed to have waived any objection to the adequacy of the FEIR and the FEIR is conclusively presumed to comply with CEQA for purposes of use by the State Water Board (Pub. Resources Code, § 21167.3, subd. (b); Cal. Code Regs., tit. 14, §§ 15096, subd. (e)(2) & § 15231). Based on the administrative record, the State Water Board finds that no Subsequent EIR or Supplement to the FEIR is necessary per the requirements of CEQA (Cal. Code Regs., tit. 14, §§ 15162 & § 15163).

Prior to reaching a decision on the issuance of Certification for the project, the State Water Board has considered the environmental effects of the project as shown in the FEIR, as well as the Program EIR (Cal. Code Regs., tit. 14, § 15096, subd. (f)). The FEIR specifies mitigation measures for identified impacts, and a Mitigation, Monitoring and Reporting Plan (MMRP) is in place to document the mitigation measures and how they are to be implemented. The Findings specified below are provided for each of those significant project impacts identified in the FEIR that are subject to the State Water Board's jurisdiction. Part D addresses potentially significant impacts which cannot be avoided or substantially lessened to a less than significant level. Part

Attachment G

State Water Board CEQA Findings of Fact and Statement of Overriding Considerations High Speed Train-Merced to Fresno Permitting Phase 1 Project

E addresses potentially significant impacts which can be avoided or lessened to a less-than-significant level.

D. GENERAL FINDINGS ON SIGNIFICANT AND UNAVOIDABLE IMPACTS ASSOCIATED WITH THE HYBRID ALTERNATIVE WHICH CANNOT BE AVOIDED OR SUBSTANTIALLY LESSENEDE TO A LESS-THAN-SIGNIFICANT LEVEL.

PK IMPACT #4: Restricted Use at Camp Pashayan (City of Fresno). Construction of the Project would displace park users during construction for two to four years. The FEIR states that although mitigation is available to minimize the impact, there remains a residual significant impact that is unavoidable; no feasible mitigation is available to avoid or substantially lessen the impact to a less than significant level.

Findings:

Changes or alterations have been required in, or incorporated into, the Project, which minimizes the significant environmental effect as identified in the final EIR.

Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures to reduce this impact to a less-than-significant level.

The remaining unavoidable and irreversible impacts of the project are acceptable in light of economic, legal, social, technological, and other considerations set forth herein because the benefits of the project (as described in Section H) outweigh any significant and unavoidable or irreversible environmental impact of the project

Rationale: Although the area of the park that would be affected does not include recreational facilities for activities that require the use of equipment or designated facilities, courses, or fields, the area that would be affected is an area that can currently be actively used and would be completely closed to visitor use for a period of approximately 2 to 4 years while construction take place in the vicinity of the park. Preventing the use of an established or planned park, recreation, or open space is considered a significant impact under CEQA. The construction activities located at the southern end of Camp Pashayan and the duration of the construction activities would restrict the recreational use of this area for safety purposes, including some water based recreational uses, and therefore would be a significant impact under CEQA.

Two beneficial uses of water associated with recreation are designated in Central Valley Regional Water Quality Control Board's Basin Plan for the San Joaquin River which flows through Camp Pashayan. These are "Water Contact Recreation (REC-1) for activities which involve body contact with water, and "Non-Contact Recreation" (REC-2) for activities involving proximity to water, but where there is generally no body contact with water. These beneficial uses would be unavoidably subject to Project impacts that cannot be mitigated; i.e., temporary loss of some recreational uses of Camp Pashayan (within the San Joaquin River Ecological Reserve). Construction of the Project would displace park users during construction for two to four years.

The proposed mitigation measure compensating for staging in park property (PK-MM #1) would reduce, the impact, but not to a level that is less than significant. No additional feasible or

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practicable mitigation measures or Certification conditions would further reduce this impact. A statement of overriding considerations for this impact is presented in Section H below.

CUMULATIVE IMPACTS: Wetlands. The FEIR reports that cumulative effects to wetlands are significant and unavoidable, and that these impacts cannot be mitigated to a less than significant level. The Final EIR states:

Wetlands may be affected by the project and other foreseeable projects. Potential wetland losses would be small relative to the quantity of existing wetland habitat in the study area but would contribute to the net loss of wetland habitat within the California Central Valley. Avoidance, minimization, and mitigation measures would minimize impacts on wetlands. Nevertheless, cumulative impacts would likely have substantial intensity under NEPA and be cumulatively considerable under CEQA (FEIR, Sec. 3.19.3.6).

The HSRA's CEQA Findings of Fact and Statement of Overriding Considerations (May 2012) (CEQA Findings of Fact) state:

Wetlands may be affected by the project and other foreseeable projects. Potential wetland losses would be small relative to the quantity of existing wetland habitat in the study area but would contribute to the net loss of wetland habitat within the California Central Valley. Avoidance, minimization, and mitigation measures would minimize impacts on wetlands, but would be cumulatively considerable under CEQA (section 4.4, p. 4-2).

And in section 7, Statement of Overriding Considerations:

The overall amount of land that would be converted to urban and transportation uses under the cumulative condition and buildout of the HST System, would result in cumulatively considerable impacts on wetlands.

The Project EIR also states that "The HST Project would implement biological resources [including wetlands] mitigation measures provided in Section 3.7.7. No additional mitigation is needed to address the project's contribution to cumulative biological impacts. Biological impacts resulting from projects proposed by others would be mitigated in accordance with the requirements under permits obtained for those projects, as necessary."

Findings:

Changes or alterations have been required in, or incorporated into, the Project, which minimizes the significant environmental effect as identified in the final EIR.

Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures to reduce this impact to a less-than-significant level.

The remaining unavoidable and irreversible impacts of the project are acceptable in light of economic, legal, social, technological, and other considerations set forth herein because the

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benefits of the project (as described in Section H below) outweigh any significant and unavoidable or irreversible environmental impact of the project.

Rationale:

Various mitigation measures are proposed in the FEIR to mitigate Project impacts to waters of the state, including wetlands. Mitigation measures incorporated into the project requiring compensatory mitigation for loss of jurisdictional waters, when implemented along with the conditions of this Certification, are adequate to minimize these cumulative impacts, but not to a level that is less than significant. No feasible mitigation measures are available to reduce this cumulative impact to a less-than-significant level. A statement of overriding considerations for this impact is presented in section H below.

E. SIGNIFICANT IMPACTS THAT ARE AVOIDED OR SUBSTANTIALLY LESSENED TO A LESS THAN SIGNIFICANT LEVEL BY MITIGATION MEASURES INCORPORATED INTO, OR REQUIRED AS A CONDITION OF APPROVAL OF, THE PROJECT

BIO IMPACT #1. Introduction of Noxious Weeds. The FEIR concludes that ground disturbance associated with grading and construction Project may result in introduction of noxious weeds, or invasive or non-native plant species ("weeds"). In addition, movement of personnel, equipment and materials can spread weed propagules. According to the FEIR, introduction of weeds is a significant impact under CEQA. Weed dispersal or establishment in any part of the Project area would potentially affect watershed function and lead to colonization by weed populations in waters of the state.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale: Mitigation measures Bio-MM#4 and 5 are proposed to address this impact. These measures require implementation of various BMPs that are widely accepted as the feasible and effective for weed control and management. These measures are consistent with good construction management and ecological restoration practice and are likely to result in eventual restoration of sites disturbed by Project activity. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4 and 5, are adequate to reduce impacts due to noxious weed dispersal and colonization to a less than significant level. These mitigation measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #2. Construction of the Project would disturb Great Valley mixed riparian forest and other riparian habitat. The FEIR concludes that riparian communities would be impacted by the Project, including over 39 acres of Great Valley mixed riparian forest, Central Coast arroyo willow riparian forest, Great Valley riparian scrub, and Great Valley oak riparian forest. Riparian forests and habitats support water quality and the beneficial uses of waters of the state. According to the FEIR, disturbance of these areas, even temporarily, significantly affect a wide range of aquatic resource functions and beneficial uses such as rare species (RARE).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

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Rationale:

The FEIR and MMRP describe six mitigation measures which would reduce the level of this impact: Bio-MM#4, 5, 6, 8 10 and 15 (described in Section H, Table A). These measures constitute common and accepted avoidance and minimization measures, and will provide for adequate restoration of unavoidable temporary impacts to aquatic resources when implemented. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 5, 6, 8, 10, and 15 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #4. Construction of the Project would disturb suitable habitat that has potential to support vernal pool brachiopods. The FEIR concludes that construction of the Project would affect potentially suitable habitat for vernal pool brachiopods including the federally listed vernal pool fairy shrimp, vernal pool tadpole shrimp, and Conservancy fairy shrimp. Activities causing impacts to these habitats would be in violation of water quality standards in that the designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)). The Project would directly impact up to 15.7 acres and indirectly impact up to 11.57 acres of potentially suitable habitat for these and other vernal pool brachiopods. According to the FEIR, impacts to vernal pool communities that provide potential habitat for vernal pool brachiopods are a significant impact under CEQA.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 4, 5, 6, 7, 8 and 10, Bio-MM#20 requires a seasonal work restriction that would help to avoid and minimize impacts to vernal pool brachiopods and Mitigation Bio-MM#12 provides for work stoppage if Project Biologists or Biological Monitors determine that take of protected vernal pool brachiopods could occur. Bio-MM#45 also requires monitoring of construction activities within jurisdictional waters. These measures are consistent with good construction management and ecological restoration practice and are adequate for the timely restoration of sites disturbed by Project activity, when implemented along with the conditions of this Certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 4, 5, 6, 7, 8, 10, 12, 20, and 45 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #5. Construction of the Project would disturb suitable habitat that has potential to support the valley elderberry longhorn beetle. The FEIR concludes that the Project would impact populations of Mexican elderberry shrubs, specifically along the San Joaquin River area. The Project would also affect habitat communities that potentially contain elderberry shrubs. Populations of the valley elderberry longhorn beetle are protected under the federal Endangered Species Act, and the loss of elderberry shrubs could impair the survival of self-sustaining populations. Consequently, the FEIR concludes that the potential impact on suitable habitat for valley elderberry longhorn beetles is significant under CEQA. Because these habitats are typically associated with riparian areas, activities causing impacts to those habitats would be in violation of water quality standards in that the designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

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Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 4, 5, 6, 7, 8 and 10, 12, 13 and 14 (as previously described), and conditions of this Certification, Bio-MM#11 will require entrapment protection measures and Bio-MM#22 will require adherence to the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999a) and will require various avoidance measures around individual elderberry plants. These measures are consistent with good construction management and ecological restoration practice and are likely to result in timely restoration of sites disturbed by Project activity, when implemented along with the conditions of this Certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, and 22 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #6. Construction of the Project would disturb California tiger salamander (CTS) habitat. The FEIR concludes that project construction would potentially disturb suitable breeding and upland habitat for California tiger salamanders. All suitable vernal pool and other seasonal wetland habitat with associated upland areas are assumed to be occupied by California tiger salamanders. According to the FEIR, the potential impact on suitable habitat for California tiger salamanders would be significant under CEQA. Activities causing impacts to these habitats would be in violation of water quality standards in that the designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 4, 5, 6, 7, 8, 10, 12, 13, 14, 20, 44, and 45 (as previously described), and conditions of this Certification, species specific measures are also required. Bio-MM#9 prohibits the use of monofilament netting in erosion control materials. Bio-MM#11 requires entrapment prevention. Bio-MM#23 specifies translocation requirements for CTS found in areas where construction activity is about to start. Bio-MM#24 requires erection of amphibian exclusion fencing around work areas. These measures are consistent with good construction management and ecological restoration practice and are likely to result in timely restoration of sites disturbed by Project activity, when implemented along with the conditions of this Certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 20, 24, 40, and 45 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #7. Construction of the Project would disturb western spadefoot toad habitat. The FEIR concludes that project construction would potentially disturb suitable breeding habitat for western spadefoot toads. The loss of suitable breeding habitat could impair the survival of self-sustaining populations. According to the FEIR, the potential impact on suitable habitat for western spadefoot toads would be significant under CEQA. Activities causing impacts to these habitats would be in violation of water quality standards in that the

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designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21, 22, 24, and 45, , Bio-MM#25 requires emergence and larval surveys for western spadefoot toads. These measures, along with the conditions of this Certification, are adequate to reduce this impact to aquatic resources to a less than significant level.

The HSRA's findings for this impact have a typographical error, referencing Bio-MM#46, which requires installation of "free-ranging mammal-proof fencing." According to discussions with HSRA (and as evidenced in HSRA's MMRP), installation of amphibian exclusion fencing, as would be required under Bio-MM#24 is intended as mitigation for Project impacts to spadefoot toad.

These measures, as shown in the MMRP, are generally consistent with good construction management and ecological restoration practice and are likely to result in protection of western spadefoot toads and their aquatic habitats. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21, 22, 24, 25, and 45 are adequate to reduce impacts to a less than significant level.These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #8. Construction of the Project would disturb habitat that supports the western pond turtle. The FEIR concludes that project construction would disturb suitable habitat for populations of western pond turtles. According to the FEIR, the potential impact on suitable habitat for western pond turtles would be significant under CEQA. To the extent that habitats for western pond turtles are typically associated aquatic and riparian habitats, impacts to those habitats would be in violation of water quality standards in that a designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 5, 6, 7, 8, 9, 10, 12, 13, 14,15, 44, and 45 (described above), and the conditions of this Certification, Bio-MM#26, 27 and 28 require implementation of species-specific measures including western pond turtle surveys, monitoring, avoidance and relocation measures. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 44, and 45 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #16. Construction of the Project would temporarily convert special-status plant communities (e.g., Great Valley mixed riparian forest, coastal and valley freshwater marsh, vernal pools). The FEIR concludes that project construction would temporarily impact

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up to 4.07 acres of Great Valley mixed riparian forest, up to 0.22 acre of other riparian vegetation communities, and 1.64 acres of Freemont Cottonwood forested wetlands. According to the FEIR, impacts to these special-status plant communities are a significant impact under CEQA. Activities causing impacts to these habitats would be in violation of water quality standards in that a designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Changes or alterations are within the responsibility and jurisdiction of another public agency and not the jurisdiction of the State Water Board. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#4, 5, 6, 7, 8, 10, 44 and 45, measures specific to vernal pools are also required. As described above, Bio-MM#19 requires pre-construction sampling and assessment of vernal pool fauna; Bio-MM#20 provides season restrictions on operations in vernal pools; and Bio-MM#21 which specifies measures to be implemented to avoid and minimize direct project impacts to vernal pools. These measures are consistent with good construction management and ecological restoration practice and are likely to result in timely restoration of sites disturbed by Project activity, when implemented along with the conditions of this Certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 5, 6, 7, 8, 10, 19, 20, 21, 44, and 45 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #17. Construction of the Project would have indirect impacts on waters of the state. The FEIR concludes that indirect impacts on waters of the state resulting from Project construction would potentially include: erosion, siltation, and runoff into natural and constructed watercourses, and soil and water contamination from construction equipment leaks. According to the FEIR, these impacts would be significant under CEQA. The potential indirect impacts listed are those most likely to occur, but that this list should not be considered a complete list of all possible indirect impacts.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#3, 4, 5, 7, 8, 10, 15, 19, 20, 21, 44, and 45 (described above), HSRA has proposed compensatory mitigation for indirect impacts. These proposals are described in the 401 application and supporting documents, and in the PRMP. These measures are consistent with good construction management and ecological restoration practice. As concluded in the FEIR, implementation of the approach specified in Bio-MM#3, 4, 5, 7, 8, 10, 15, 19, 20, 21, and 44 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

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BIO IMPACT #21. Construction of the Project would disturb Camp Pashayan (San Joaquin River Ecological Reserve). The FEIR concludes that a portion of Camp Pashayan (within the San Joaquin River Ecological Reserve) is within and adjacent to the construction footprint of the Hybrid Alternative and therefore would be affected by construction of the Project. Bio Impact #21 would include loss of riparian and aquatic habitats in Camp Pashayan that are subject to the State Water Board's authority (additional consideration of impacts to water based recreation is provided in the discussion of PK Impact # 4 and #7). According to the FEIR, these impacts on Camp Pashayan would be significant under CEQA, and may directly or indirectly affect designated beneficial uses of waters (i.e. rare species habitats (RARE)) and contact and non-contact water-based recreation (REC-1 and REC-2).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale: The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#15, 18, 19, 20, 21, 44 and 45, Bio-MM#17 will require that pre-construction surveys identify special status plant species and implement avoidance measures or, if avoidance is not feasible, incorporate the species into the relocation/compensation program defined in *Bio-MM#48*: *Compensate for Impacts on Special-Status Plant Species.* PK-MM#4 would also provide for minimization and avoidance of impacts in the park, and would provide In-Lieu Fee contributions for property impacts associated with pier installation. These measures are consistent with good construction management and ecological restoration practice and are likely to result in timely restoration of sites disturbed by Project activity. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 15, 17, 18, 19, 20, 21, 44, 45, and 48 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #22. Project period impacts would permanently convert Great Valley mixed riparian forest and other riparian habitat (Coastal and Valley Freshwater Marsh and vernal pools addressed in BIO IMPACT #16). The FEIR concludes that the Project would directly and permanently convert up to 4.96 acres of Great Valley mixed riparian forest and up to 1.23 acres of other riparian vegetation communities. According to the FEIR, these impacts would be significant under CEQA. Riparian forests and habitats support water quality and the beneficial uses of waters of the state, such as RARE. Permanent loss of these habitats can be a significant impact affecting a wide range of aquatic resource functions and beneficial uses.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact: Bio-MM#4, 14, 49, 57, 58, and 59. These measures are consistent with good construction management and ecological restoration practice. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 49, 57, 58, and 59 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

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BIO IMPACT #24. Project period impacts from the Project would permanently convert suitable habitat that has the potential to support vernal pool brachiopods.

The FEIR concludes that the Project would directly impact up to 2.82 acres of vernal pools. Vernal pools are suitable habitat for vernal pool brachiopods, which are special-status species. According to the FEIR, this impact would be significant under CEQA, and may directly or indirectly affect designated beneficial uses of waters would be affected (i.e. rare species habitats (RARE)). Vernal pool brachiopod habitat is one designated beneficial use of waters of the state (RARE).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes Bio-MM#4, 14, 57, 58, 59, and 60 to address this impact. These measures are consistent with good construction management and ecological restoration practice and are likely to result in timely restoration of sites disturbed by Project activity, when implemented along with the conditions of this certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 57, 58, 59, and 60 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #25. Project period impacts from the Project would permanently convert suitable habitat that has the potential to support valley elderberry longhorn beetle. The FEIR concludes that the Project would displace populations of Mexican elderberry shrubs, specifically along the San Joaquin River area. Up to 1.31 acres of habitat that potentially contains elderberry shrubs would be directly impacted. According to the FEIR, this impact would be significant under CEQA. To the extent that valley elderberry longhorn beetle habitats may occur in waters of the state, impacts to those habitats would be in violation of water quality standards in that a designated beneficial use waters would be affected (i.e. rare species habitats (RARE)).Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures Bio-MM#4, 14, 51, and 60 to address this impact, along with concurrent implementation of project-wide measures Bio-MM#57 58, & 59. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 51, 57, 58, 59, and 60 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the.

BIO IMPACT #26. Project period impacts from the Project would permanently convert suitable habitat that has the potential to support California tiger salamander (CTS).

The FEIR concludes that the Project would displace potentially suitable breeding habitat for California tiger salamanders. Up to 15.57 acres of potentially suitable aquatic breeding habitat would be directly impacted. According to the FEIR, this impact would be significant under CEQA. To the extent that some seasonal CTS habitats are typically in or closely associated with

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waters of the state, impacts to those habitats would be in violation of water quality standards in that a designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact: Bio-MM#4, 14, 25, and 52 (Which incorporates Bio-MM#57, 58, 59, and 60). As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 25, 52, 57, 58, 59, and 60 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #27. Project period impacts from the Project would permanently convert suitable habitat that has the potential to support western spadefoot toad. The FEIR concludes that the Project would displace potentially suitable aquatic breeding and upland habitat for western spadefoot toad. The loss of suitable breeding and upland habitat could impair the survival of self-sustaining populations. According to the FEIR, the conversion of suitable habitat for western spadefoot toad would be significant under CEQA. To the extent that these habitats are typically in or closely associated with waters of the state, impacts to those habitats would be in violation of water quality standards in that a designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation measures to address this impact. In addition to Bio-MM#4, 14, and 25, Bio-MM#52 (which incorporates Bio-MM#57, 58, 59, and 60) is also proposed. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 25, 52, 57, 58, 59, and 60 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #28. Project period impacts from the Project would permanently convert suitable habitat that has the potential to support western pond turtle. The FEIR concludes that the Project footprint contains potentially suitable habitat for populations of western pond turtles. All suitable aquatic habitats are assumed to be occupied by western pond turtles. The loss of suitable habitat could impair the survival of self-sustaining populations and, according to the FEIR, would be significant under CEQA. To the extent that western pond turtle habitats occur in waters of the state, impacts to those habitats would be in violation of water quality standards in that a designated beneficial use of waters would be affected (i.e. rare species habitats (RARE)).

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale:

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The FEIR proposes mitigation measures to address this impact, including Bio-MM#4, 14, 49, and 53 (which incorporates Bio-MM#57, 58, and 59). These measures are consistent with good construction management and ecological restoration practice and are likely to result in protection of western pond turtles. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 49, 53, 57, 58, and 59 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #37. Project period impacts from the Project would permanently convert jurisdictional waters. The FEIR concludes that construction of the Project would “displace” (i.e. permanently fill or otherwise irreversibly impact) “wetlands and jurisdictional waters regulated by [CDFW], the USFWS, and the ACOE”. According to the FEIR, this impact would be significant under CEQA.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen this significant environmental effect as identified in the FEIR.

Rationale:

The FEIR proposes mitigation Measures to address this impact.

- Bio-MM#4: Prepare and Implement a Weed Control Plan (Described Above)
- Bio-MM#14: Post-Construction Compliance Reports (Described Above).
- Bio-MM#57: Conduct Delineation of Jurisdictional Waters and State Streambeds (Described Above).
- Bio-MM#58: Prepare and Implement a Habitat Mitigation and Monitoring Plan (Described Above).
- Bio-MM#59: Compensate for Permanent Impacts on Jurisdictional Waters (Described Above).
- Bio-MM#60: Offsite Habitat Restoration, Enhancement, and Preservation (Described Above).

These measures are consistent with good construction management and ecological restoration practice and are likely to result in protection of jurisdictional waters and beneficial uses of waters of the state when implemented along with the conditions of this Certification. As concluded in the FEIR, implementation of the approach specified in Bio-MM#4, 14, 57, 58, 59 and 60 are adequate to reduce direct impacts to a less than significant level (note, however, that as discussed for cumulative effects in Section D above, these measures are sufficient to minimize impacts, but not to a level that is less than significant). These measures, as presented in the MMRP, are incorporated by reference in the Certification.

BIO IMPACT #40. Construction in Camp Pashayan. The FEIR concludes that construction of the Project would displace vegetation within Camp Pashayan (within the San Joaquin River Ecological Reserve), and would thereby also impact recreational use of the park. According to the FEIR, this impact would be significant under CEQA.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

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Rationale: The FEIR proposes mitigation measures to address these impacts. Mitigation Measure PK-MM#1 requires compensation for lost recreational opportunities through various park management actions and ecological restoration practices. PK-MM #4 will include in-lieu fee payments for property impacts associated with pier installation as well as revegetation of disturbed areas with native plantings. As concluded in the FEIR, implementation of the approach specified in Bio-MM#1 and 4 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

PK IMPACT #7. Acquisition of Camp Pashayan Park Property. The FEIR concludes that construction of the Project would cause the permanent loss of use of part of Camp Pashayan (within the San Joaquin River Ecological Reserve) as a result of acquisition of 0.6 acre of park lands for the High Speed Train alignment and footprint. This may reduce the opportunities for park and trail use, including access to water based recreational opportunities. According to the FEIR, this impact would be significant under CEQA.

Findings:

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Rationale: The FEIR proposes mitigation measures to address this impact. Mitigation Measure PK-MM#1 requires compensation for lost recreational opportunities through various park management actions and ecological restoration practices. PK-MM #4 will include in-lieu fee payments for property impacts associated with pier installation as well as revegetation of disturbed areas with native plantings. As concluded in the FEIR, implementation of the approach specified in Bio-MM#1 and 4 are adequate to reduce impacts to a less than significant level. These measures, as presented in the MMRP, are incorporated by reference in the Certification.

F. MITIGATION AND MONITORING PROGRAM

As mentioned in the discussion of Project impacts above, HSRA has approved a Project Mitigation Monitoring and Reporting Plan (MMRP) to guide implementation of all project mitigation measures by assigning implementation and reporting responsibilities and specifying timelines. The MMRP lists all Project mitigation measures and reporting and is herewith incorporated by reference. The MMRP is available at:
http://www.hsr.ca.gov/docs/programs/merced-fresno_eir/final_EIR_MerFres_MMRP_Rev1_A_SIGNED.pdf

The MMRP incorporates by reference all “terms and conditions” of all permits including the conditions of this Certification (see Mitigation Measure Bio-5).

G. STATEMENT OF OVERRIDING CONSIDERATIONS

As noted in part A above, The HSRA’s CEQA Findings of Fact concludes that implementing the Hybrid Alternative will result in certain significant impacts to the environment that cannot be avoided or substantially lessened with the application of feasible mitigation measures or feasible alternatives. Because there are significant and unavoidable impacts within the State Water

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Board's jurisdiction, the State Water Board provides this Statement of Overriding Considerations in compliance with CEQA (Pub. Resources Code, § 21081; Cal. Code Regs., tit. 14, §§ 15093 & § 15096, subd. (h)).

The significant and unavoidable impacts and the benefits related to implementing the HST system in the Merced to Fresno Section via the Hybrid Alternative are disclosed in the HSRA's CEQA Findings of Fact. The unavoidable impacts to resources under the jurisdiction of the State Water Board are discussed in Section D above.

The State Water Board has considered the economic, legal, social, technological, and other benefits, including region-wide or statewide environmental benefits, of the Project against its unavoidable environmental risks and finds that the specific economic, legal, social, technological benefits, including region-wide or statewide environmental benefits of implementing the Project outweigh the significant and unavoidable environmental impacts. These benefits are largely associated with resources that are not part of the State Water Board's authorities. However, the State Water Board agrees with the listing of benefits of the Project cited in the HSRA's CEQA Findings of Fact including long term transportation benefits, air quality benefits, greater energy efficiency, reduced highway noise and social benefits. In addition, the State Water Board agrees that the Project is consistent with the state policies in Executive Order S-3-05, Assembly Bill 32 (Stats. 2006, ch. 488) and Senate Bill 375 (Stats. 2008, ch. 728). Specifically, the Project would provide improved intercity transportation options throughout the Project's service area. To the extent that the Project displaces air and personal vehicle travel, benefits to air quality, greenhouse gas emissions, and highway congestion are expected.

These benefits are supported by substantial evidence in the record and are adequate to support a Finding of Overriding Considerations that offset the unavoidable adverse environmental effects.

H. MITIGATION MEASURES

Mitigation measures cited above are presented in Table A.

Note that all references to "CDFG" are within citations from Project documents and the MMRP, which was compiled before that agency was renamed the Department of Fish and Wildlife.

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TABLE A

**Mitigation Measures Applicable to Resources Subject to the Water Boards Authorities for the
High Speed Rail Merced to Fresno Permitting Phase 1 Project**

MITIGATION MEASURE	MITIGATION MEASURE REQUIREMENT	ADDITIONAL STATE WATER BOARD STAFF FINDINGS AND COMMENTS
Bio-MM#3	Prepare and Implement a Worker Environmental Awareness Program.	The mitigation measure, as presented in the Final EIR and MMRP, states that construction crews will be informed during the WEAP training that, to the extent possible, travel within the marked project site will be restricted to established roadbeds. Established roadbeds include all pre-existing and project-constructed unimproved, as well as improved roads.
Bio-MM#4	Prepare and Implement a Weed Control Plan.	This plan will be linked to the Project Restoration and Revegetation Plan (Bio-MM#6) and will be part of the BRMP. Note that this plan is referenced by many other mitigation measures.
Bio-MM#5	Prepare and Implement a Biological Resources Management Plan.	Many of the Project impacts to resources under the State and Regional Water Boards authority, as identified in the FEIR, are to be mitigated in part through development of a Biological Resources Management Plan (BRMP) as specified in Mitigation Measure Bio-MM#5. The goal of the BRMP is to assist the Project Biologist with an organized reporting tool to ensure the mitigation measures and terms and conditions from the various project permits, including this Certification, are implemented and reported in a timely manner. The BMP will include all avoidance, minimization, repair, mitigation, and compensatory actions stated in the mitigation measures or terms and conditions.
Bio-MM#6	Prepare and Implement a Restoration and Revegetation Plan	During final design, the Contractor's Biologist will prepare a restoration and revegetation plan (RRP) for upland communities and verified by the Project Biologist. This plan will be part of the BRMP.
Bio-MM#7	Delineate Environmentally Sensitive Areas and Environmentally Restricted Areas (on plans and in-field).	Bio-MM#7 states: "Prior to ground-disturbing activities, to the extent practicable, the Project Biologist will verify that environmentally sensitive areas (ESAs) and environmentally restricted areas (ERAs) are delineated as appropriate." In addition, sensitive resource areas will be specially delineated so that special operating rules (e.g., no equipment staging within 100' of waters) can be enforced.
Bio-MM#8	Project-wide Restrictions on Location of Equipment Staging Areas.	Project-wide restrictions on location of staging areas specify that sensitive resources are to be avoided.
Bio-MM#9	Monofilament Netting	Prohibits the use of monofilament netting in erosion control materials.

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TABLE A (cont.) Mitigation Measures Applicable to Resources Subject to the Water Boards Authorities for the High Speed Rail Merced to Fresno Permitting Phase 1 Project

MITIGATION MEASURE	MITIGATION MEASURE REQUIREMENT	MITIGATION MEASURE SUMMARY
Bio-MM#10	Vehicle Traffic	Restrictions on traffic and vehicular/equipment operation specify that sensitive resources are to be avoided.
Bio-MM#11	Entrapment Prevention	Requires BMPs to prevent wildlife entrapment in construction sites, equipment and materials.
Bio-MM#12	Work Stoppage	Requires immediate cessation of activity if special status species gain access to Project footprint.
Bio-MM#13	"Take" Notification and Reporting	Contractor's Biologist, in coordination with the Project Biologist and Mitigation Manager, will notify the USFWS and/or CDFW immediately in the case of an accidental death or injury to a federal or state listed species during project-related activities. The Authority or its designee will be notified prior to the notification to the agencies. The Project Biologist will submit a memorandum to the Mitigation Manager documenting compliance.
Bio-MM#14	Post-Construction Compliance Reports	Requires that after each construction period is completed, the Project Biologist will submit post-construction compliance reports consistent with the appropriate agency protocols.
Bio-MM#15	Restoration of Temporary Riparian Impacts	During post-construction, the Contractor's Biologist will revegetate all disturbed riparian areas using appropriate plants and seed mixes. Bio-MM-#15 requires simultaneous compliance with Bio-MM-#4, 5, 6, 7, 8, 10 and 15.
Bio-MM#17	Conduct Pre-Construction Surveys for Special-Status Plant Species.	Conduct pre-construction surveys for special-status plant species in suitable habitat areas subject to ground disturbing activities.
Bio-MM#18	Prepare and Implement Plan for Salvage, Relocation, and/or Propagation of Special-Status Plant Species	Prepare and implement a plan prior to ground-disturbing activities to address monitoring, salvage, relocation, and propagation of special-status plant species.
Bio-MM#19	Conduct Pre-Construction Sampling and Assessment for Vernal Pool Fauna	Prior to ground-disturbing activities, the Project Biologist will conduct pre-construction, non-protocol surveys in seasonally inundated habitats (seasonal wetland, non-inundated wetlands) within the construction footprint.

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**TABLE A (cont.) Mitigation Measures Applicable to Resources Subject to the Water Boards Authorities for the
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MITIGATION MEASURE	MITIGATION MEASURE REQUIREMENT	MITIGATION MEASURE SUMMARY
Bio-MM#20	Seasonal Vernal Pool Work Restriction	For seasonal avoidance of special-status vernal pool brachiopods and vernal pool dependent species (e.g., California tiger salamander), the Contractor will not work within 250 feet of aquatic habitats suitable for these species (e.g., vernal pools and other seasonal wetlands) from October 15 to June 1.
Bio-MM#21	Implement and Monitor Vernal Pool Protection	If construction impacts can be avoided, the vernal pool(s) will be protected by erecting exclusion fencing. Otherwise, impacts will be minimized with BMPs, timing, and other practices.
Bio-MM#22	Implement Conservation Guidelines During the Construction Period for Valley Elderberry Longhorn Beetle	Requires adherence to the <i>Conservation Guidelines for the Valley Elderberry Longhorn Beetle</i> (USFWS 1999a) and will require various avoidance measures around individual elderberry plants.
Bio-MM#23	Translocation of California Tiger Salamanders	Prior to ground-disturbing activities... conduct a pre-construction survey and relocate any California tiger salamanders from within the construction footprint in accordance with the Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (USFWS 2003).
Bio-MM#24	Erect Amphibian Exclusion Fencing	Mitigation measure states: "The Contractor's Biologist will install exclusion barriers (i.e. silt fences) to influence the movement of California tiger salamander, including other amphibian species (sic), within impacted areas."
Bio-MM#25	Conduct Emergence and Larval Surveys for Western Spadefoot Toad.	Conduct pre-construction emergence and larval surveys for western spadefoot toad during the fall and winter rainy season. Emergence surveys will be conducted within the appropriate time period(s) after precipitation events.
Bio-MM#26	Conduct Western Pond Turtle Pre-Construction Surveys and Relocation.	Conduct pre-construction surveys for western pond turtles to determine the presence or absence of western pond turtles within the construction footprint. If western pond turtles are found within the construction footprint, conduct daily clearance surveys prior to the initiation of any construction activities.
Bio-MM#27	Conduct Western Pond Turtle Monitoring	During ground disturbing activities, the Project Biologist will observe all construction activities within habitat that supports populations of western pond turtles.

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TABLE A (cont.) Mitigation Measures Applicable to Resources Subject to the Water Boards Authorities for the High Speed Rail Merced to Fresno Permitting Phase 1 Project

MITIGATION MEASURE	MITIGATION MEASURE REQUIREMENT	MITIGATION MEASURE SUMMARY
Bio-MM#28	Implement Western Pond Turtle Avoidance and Relocation	Prior to ground-disturbing activities, if a western pond turtle nesting area is present and will be affected by ground-disturbing activities as determined by the Project Biologist, the Contractor will avoid western pond turtle nesting areas. If avoidance is not feasible, as determined by the Authority or its designee, the Project Biologist will coordinate with CDFG to identify where to relocate western pond turtles.
Bio-MM#44	Restore Temporary Impacts on Jurisdictional Waters.	Sets restoration requirements for temporary Impacts on Jurisdictional Waters.
Bio-MM#45	Monitor Construction Activities within Jurisdictional Waters.	Requires monitoring of construction activities within jurisdictional waters.
Bio-MM#48	Compensate for Impacts to Special Status Plants	Requires compensatory mitigation for special status plants.
Bio-MM#49	Compensate for Permanent Impacts to waters	Requires compensation for permanent impacts to all classes or types of riparian resources.
Bio-MM#50	Compensate for Impacts on Special-Status Plant Species.	Prior to Final Design and during the permitting process, Purchase credits from an existing mitigation bank or conduct a special-status plant re-establishment program within the same watershed or in proximity to the impact area at a 1:1 ratio.
Bio-MM#51	Implement Conservation Guidelines During the Project Period for Valley Elderberry Longhorn Beetle.	Conduct compensatory mitigation for the valley elderberry longhorn beetle, including transplantation and replacement of elderberry shrubs, and maintenance for replacement shrubs.
Bio-MM#52	Compensate for Impacts on California Tiger Salamander	Determine compensatory mitigation for the temporary and permanent loss of suitable upland and aquatic breeding habitat.
Bio-MM#53	Implement Western Pond Turtle Mitigation Measures.	Mitigate the impacts on western pond turtle in accordance with the USFWS Biological Opinion and/or CDFG 2081(b).
Bio-MM#57	Conduct Delineation of Jurisdictional Waters and State Streambeds	States that HSRA will "conduct a jurisdictional delineation, documenting jurisdictional waters and state streambeds consistent with USACE, SWRCB, and CDFG guidance."

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**TABLE A (cont.) Mitigation Measures Applicable to Resources Subject to the Water Boards Authorities for the
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MITIGATION MEASURE	MITIGATION MEASURE REQUIREMENT	MITIGATION MEASURE SUMMARY
Bio-MM#58	Prepare and Implement a Habitat Mitigation and Monitoring Plan.	Prepare an HMMP to mitigate for temporary and permanent impacts on jurisdictional waters and state streambeds. Note: This HMMP was presented as the PRMP in the Certification Application.
Bio-MM#59	Compensate for Permanent Impacts on Jurisdictional Waters.	Mitigate permanent wetland impacts through compensation determined in consultation with the USACE, SWRCB, USFWS, and CDFW.
Bio-MM#60	Off-site Habitat Restoration, Enhancement, and Preservation.	Prior to site preparation at the mitigation site, the Authority or its designee will consider the off-site habitat restoration, enhancement, or preservation program, and identify short-term temporary and/or long-term permanent effects on the natural landscape. A determination will be made on any effects from the physical alteration of the site to onsite biological resources, including plant communities, land cover types, and the distribution of special status plants and wildlife.
PK-MM#1	Compensate for Staging in Park Property	Reduces loss of recreational opportunity, including REC-1 and REC-2 water based recreational opportunity, at Camp Pashayan.
PK-MM#4	Acquire Park Property for Camp Pashayan	Final design will continue to seek to minimize right-of-way impacts and pier placement in Camp Pashayan. Mitigation will include in-lieu fee for property impacts associated with pier installation as well as revegetation of disturbed areas.